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ORIGINAL ARTICLES.

LITHOTOMY AFTER PARTIALLY SUCCESSFUL CLOSURE OF EXSTROPHY OF THE BLADDER—SUBSEQUENT CONSTRUCTION OF A PERINEAL URETHRA FROM SCROTAL TISSUE.

Read before the Philadelphia Academy of Surgery, Nov. 5, 1894.

BY JOHN B. ROBERTS, M.D.
PHILADELPHIA, PA.

In March, 1893, a child, aged 8 years, with exstrophy of the bladder, was brought to me at the Polyclinic Hospital for treatment. The mother told me that when 3 or 4 years old he had been operated on at the Children's Hospital. It was evident that some improvement in the condition had been made by this early operation, because the posterior wall of the bladder did not protrude, as is often the case, but formed a rather shallow cup at the base of the rudimentary penis. The flaps had evidently been taken from the surface above the congenital defect and at its two sides, as in Wood's operation, for the cicatrices in these regions were apparent. The urine ran from the bladder over the penis and scrotum, and also escaped from linear sinuses along the top and sides of the thickened tissue which closed the upper portion of the cleft in the bladder.

As a first step in the operation I endeavored to produce a perineal fistule by thrusting a curved needle from the base of the bladder through the perineum, behind the scrotum, and conducting a drainage through the opening so made. The tube was increased in size at various intervals until at the end of two months there was a canal which would contain a rubber urethral bougie of moderate size. I then etherized the patient a second time, and made a circular denudation around the edge of the open bladder. The rudimentary penis, consisting of the spongy body, the cleft glans and cleft prepuce was entirely removed. Cylindrical masses on each side of the opening in the bladder, which appeared to be the representatives of the cavernous bodies, were also dissected away. A piece of soft rubber catheter was then introduced through the perineal opening established by the first operation, and its end allowed to reach the floor of the bladder. The purpose of this procedure was to secure downward drainage of the urine after the edges of the bladder were brought together. Seven deep sutures were next inserted in a manner to bring the denuded edges of the bladder wall into apposition in a vertical direction. The wound was then sealed with iodoform and collodion. The perineal tube, however, soon became blocked with mucus and pus, which was continually flowing from the irritated mucous membrane of the bladder and was not satisfactory as a drain. I finally passed a drainage tube from one of the upper sinuses directly through the bladder and out of the perineal opening, in order to prevent the sutures in the middle line from yielding. These middle sutures, however, finally gave way, and when the patient passed from observation there was a large opening in the middle of the attempted closure. Some union had, however, been obtained. The perineal opening showed a marked tendency to close.

I did not see the patient again until October, 1894, sixteen months later. At this time the perineal opening had entirely closed and its scar was inconspicuous, but the exstrophy of the bladder was completely covered by the new anterior wall. At about the middle of this wall, which had been constructed in the manner described, was a small opening of sufficient size to admit the end of a large probe. At the upper and right-hand side of the portion of the wall which had been constructed in infancy was a linear sinus about an inch in length. This was situated at one of the points which, when I first saw the child, allowed the urine to escape. There was a little oozing of urine from the small central fistula, but the major portion escaped from the sinus at the upper right-hand border.

The mother said that the patient suffered severe pain, which was evident by his crying at the least touch of the skin in the neighborhood of the central sinus. The insertion of a probe made it evident that the new bladder contained calculi. The child's general condition was poor, and it was evident that he had been suffering greatly. The offensive character of the urine and difficulty of keeping him free from its odor caused me to give him small doses of turpentine, which, as is well known, imparts a peculiarly agreeable odor to the urine. This device seemed to render the patient less offensive to the others in the ward. A few days later I enlarged the opening in the middle of the bladder wall in front and found the cavity filled with calculi. They were ten in number and varied from five-sixteenths to five-eighths of an inch in diameter. Their combined weight when not dried was 195 grains. It seemed to me that the establishment of a perineal urethra lined with skin would afford efficient drainage to the new bladder, and would remain patulous. I therefore determined to cut a channel between the perineum and the floor of the bladder, and turn in flaps of skin taken from the scrotum. As a first step, I incised the scrotum in the middle line and removed both testicles. I then made a puncture downward from the base of the bladder to this scrotal incision. This permitted me to utilize the scrotal tissue for lining the new channel. By two horizontal incisions on each side of the opening, I obtained strips of scrotal skin and superficial fascia half an inch wide and an inch and a half long. To the inner end of these, ligatures

were fastened and the threads carried upward through the new urethra. The cutaneous flaps were then drawn up along the canal into the bladder, and were then sutured on each side of the incision in the middle line of the anterior bladder wall. This maneuver lined both sides of the perineal opening with skin from the perineum to the anterior bladder wall. A drainage tube was inserted to keep the channel patulous, and the bladder and tube were washed out.

No attempt was made to close the opening in the middle line or that at the upper and right-hand side. I deemed it better to leave these open for convenience in flushing the foul bladder cavity. It was my intention to close these at a later period. The edges of the wound in the perineum left by the plastic operation were brought together with sutures, and healed promptly. Antiseptic solutions were used for washing out the bladder and tube, and the patient did well for several days. His temperature was not high, and the drainage through the perineal tubes was quite satisfactory, though not always perfect.

At the end of three or four days he began to lose his appetite and vomited occasionally. He died on the fifth day, apparently from exhaustion.

An autopsy showed disease of the left kidney, which was riddled with small abscesses. The ureter on this side was double, and showed great enlargement of the caliber and thickening of the walls. The pelvis of the kidney and double ureter were filled with pus. Just before the two ureters of this kidney reached the bladder, they united and opened into the bladder by a single orifice. The right kidney and ureter appeared to be normal.

The specimens presented will make the description of the case clear, since Dr. Bannister, the resident physician, removed the whole bladder and scrotum with the attached ureters and kidneys.

I believe this method of constructing a perineal urethra and lining it with skin from the scrotum will be found an efficient device in dealing with these unfortunate cases. It is very probable that the child would have lived if I had taken this step originally, instead of making an opening into the perineum without cutaneous lining.

DISCUSSION.

DR. H. R. WHARTON—I would ask Dr. Roberts if it is not possible that these stones might not have had some connection with the growth of hair on the inverted flap. In Wood's operation the inverted flap often contains hairs, and these may continue to grow as the patient increases in age, and become the seat of calcareous depositions from the urine.

DR. L. W. STEINBACH—I would ask Dr. Roberts what is his theory in regard to the formation of these calculi? What is their nucleus? I recall a case of vaginal hysterectomy where a portion of the posterior wall of the bladder was removed. Within a week the stitches closing the bladder opening were covered with deposits of considerable size, and it was not an easy matter to remove the sutures, incrusted as they were.

OPERATIVE TREATMENT OF THE DISEASES OF THE GALL BLADDER.

Read at the Meeting of the Military Tract Medical Association held at Quincy, Ill., Oct. 18 and 19, 1894.

BY ALEX. HUGH FERGUSON, M.D.

CHICAGO.

Since the days of Petit (1733) till our own time, very little or no progress was made in the surgery of the gall bladder. To Dr. Bobbs, of Indianapolis, (1867) belongs the credit of being the first to deliberately open the gall bladder for the removal of gall stones; to Marion-Sims (1868) the honor of giving the procedure a scientific name—cholecystotomy; and to Lawson Tait the praise of perfecting its technique as we perform it to-day. It was found that a permanent fistula followed in a certain proportion of the cases operated upon, much to their discomfort, exhaustion, and sometimes even death from the loss of bile. There are certain abnormal conditions which render life loathsome to one's self, and this may be said to be one of them. While it is true that nature had in some cases made an opening into the bowel for the passage of the gall stones and bile, and this resulted in perfect cures, still not until cholecystotomy allowed the escape of bile from the economy, proving a nuisance and a danger to life, did an indication for a new operation—cholecystenterostomy forcibly impress itself upon the surgical world. It was suggested by Nussbaum (1880), performed by Winiwarter (1881), and followed by Monastyrski, Kappeler, Gaston, Harley, Mayo Robson, Colzi, DePage, Terrier, Courvoisier, Frische, Bardenheuer, Czerny, Helfreich, Réclus and others. Some used caustics, others sutures or the elastic ligature, which attempts were all tedious and dangerous. On June 11, 1892, Dr. J. B. Murphy, of Chicago, by a stroke of genius applied with success an invention of his own—the anastomosis button—to establish a bile route between the gall bladder and duodenum, and closed the abdominal wall at the same time. The selection of a particular portion of the alimentary canal—the duodenum, led me on August 3, 1893, when I first used this button to give the name of cholecyst-duodenostomy to Dr. Murphy's operation. *The total extirpation of the gall bladder*—cholecystectomy—suggested itself to Dr. Langenbech, not for malignancy as one would suppose, but for gall stones. In spite of the bitter opposition he received from 1884 to 1889, a fair proportion of surgeons have followed his advice. With this short introduction I shall now proceed to discuss the indications which induce us to perform the above mentioned three principal operations upon the gall bladder, viz.:

1. Cholecystotomy.
2. Cholecyst-duodenostomy. (Cholecystenterostomy.)
3. Cholecystectomy.

Puncture of the gall bladder and crushing of gall stones in the gall bladder could only be mentioned but to be condemned. The crushing or removal through incision of gall stones obstructing the biliary ducts are procedures worthy of our attention. It appears to be inevitable to the progressive development of medicine and surgery, for the scientific pendulum to swing forward or back, responsive to laudations or adverse criticisms, be they just or unjust. By trying, sifting, selecting and carefully studying our own work, and that of others' do we eventually arrive at an approximate value of an operation, and the main indications for recommending it. Be the function of the gall bladder a storer of bile, or the controller of the tension of the bile circulation (Murphy) or both, we know it constantly contains more or less bile; that cholesterine concretions—the so-called gall stones—frequently accumulate within it, pass down the ducts, causing severe pain and result in grave constitutional disturbances, jaundice, etc., from obstruction; that the gall bladder is subject to diseased conditions; that compression of the common duct by neoplasms, or its occlusion by parasites and pancreatic calculi affect it indirectly; and, finally, we know that this organ may be dispensed with altogether without deleteriously affecting the system. Nearly all these call for surgical aid. *Cholelithiasis* is by far the most common of them. Let us, for a moment, glance at the many dangers of this disease:

1. Colic.
2. Obstruction of the cystic duct.
3. Obstruction of the common duct.
4. Obstruction of the bowels.
5. Dropsy of the gall bladder.
6. Inflammation of the gall bladder.
7. Empyema of the gall bladder.
8. Contraction of the gall bladder.
9. Ulceration into the peritoneal cavity.
10. Cicatricial obstruction of the ducts.
11. The irritation and low inflammation predisposing to cancer.
12. Jaundice and cholemia.

Let the physician who is in the habit of saying to his patients, suffering attack upon attack: "Oh, its only gall stone colic," study these dangers, and then apply the postponement of seeking surgical relief to his own person. The Golden Rule is aptly befitting. Can the milder forms of cholelithiasis be cured without the knife? Why not? Why does this excrementitious substance—cholesterine—not go on to its stercoraceous transformation, and not form stones in the biliary system of ducts? Is it a conservative act, on the part of nature, to prevent absorption of the constituents of the bile in catarrhal and obstructive conditions of these ducts? What is the relationship of a frequent companionship of cholelithiasis and the gouty and uric acid diathesis? What local or blood changes predispose to their formation? What diet, medicine, or hygienic surroundings might prevent them? Solve that question and the surgeon's knife, needle or button will happily be less in demand. Experimental researches in these directions are very enticing and should bring forth most beneficial results. At present, however, we must content ourselves with the frequent recommendation of an operation—the opprobrium of the healing art.

When should the gall bladder be explored by opening the abdomen?

1. For attacks of biliary colic, where the gall bladder has become enlarged, and then suddenly subsided with instant relief to the patient, but no stones found in the stools, and the region of the gall bladder remains tender for several days. This most likely means that a stone in the gall bladder entered the cystic duct, but was too large to pass through it. The gall bladder became more and more filled with secretions from its mucous lining, gradually distending it until the stone was liberated and fell back into the cavity of the gall bladder again, and the mucus and bile found free escape through the ducts. Small stones may pass through and a large one obstruct the cystic duct, giving rise to a similar colic, but if at all slow in descending the common duct signs of the absorption of bile become manifest.

2. For jaundice following one or more attacks of colic. It may be caused by a stone urged on from the gall bladder by repeated attacks, and becoming lodged at the commencement of the common duct. In this instance the gall bladder enlarges steadily for a time, becomes more tense and tender, before any diminution is noticed, and this decrease in size, when it does occur, is very gradual indeed, the jaundice deepening all the time. A stone lodged in any part of the common duct will produce a similar condition.

The following case is a clinical picture of this indication:

In November, 1891, Mrs. Van C., aged 37, came from Dakota to Winnipeg for treatment. She had suffered for twelve years with biliary colic, the attacks became more and more frequent, until she had only two or three weeks' respite. The region of the gall bladder was always more or less tender for years; has had inflammation there several times; the last attack came on six weeks previously, and jaundice has been present since the first few days of its onset. On presenting herself at the Winnipeg General Hospital, after riding on the train over one hundred miles, the first indication was to relieve the pain and inflammatory symptoms which had become aggravated by the journey. She was rather emaciated and profoundly poisoned from the absorption of bile. Her whole trouble was caused by a small stone which, after opening the gall bladder, I removed with forceps from the origin of the common duct. The walls of the gall bladder were fully half an inch thick, friable, and bound down with extensive adhesions. The cavity of the gall bladder was washed out and its walls stitched with the parietal peritoneum and skin, in the usual way. It closed rapidly and she has enjoyed excellent health ever since.

3. For persistent tenderness over the gall bladder. The interpretation of this sign is that subacute inflammation is going on, due to the presence of gall stones. So tender is this region that in some cases even the pressure of the necessary clothing is intolerable. Upon looking into the history of such cases it is found to be that of biliary colic. The condition is likely to be a contracted and thickened gall bladder reduced to the size of the stone or stones within it. There may be points of ulceration or even gangrene. It must be remembered that persistent pain is also characteristic of cancer of the gall bladder. If cancerous, an irregular tumor, slowly increasing in size and accompanied by the subjective and objective symptoms and signs of malignancy makes its appearance.

4. For enlargement. In all cases of persistent and marked enlargement of the gall bladder, an ex-

ploratory incision should be advised. It means that it may contain: 1, an enormous number of stones; 2, clear mucus; 3, pus or muco-pus and some bile; 4, nothing but bile; and 5, that a new growth is invading it or the ducts, usually cancer. Should the tumor be due to stones, mucus or pus, a history of cholelithiasis is almost invariably elicited but not always. Dropsy of the gall bladder not infrequently occurs without any history of colic, and it becomes enormously enlarged reaching down to the brim of the pelvis. I can recall two such cases:

Case 1.—A half-breed woman, 60 years of age, presented herself at my clinic at St. Boniface Hospital, Manitoba, with a movable tumor in the right abdomen, so closely simulating a floating kidney that I could not to my own satisfaction make a differential diagnosis. It could be moved to the region of the kidney, but it could not be felt to slip into its bed as a kidney does; there was no bowel in front of it, and an area of some dullness could be traced to the edge of the liver; three facts which pointed to the enlargement being a gall bladder. On Oct. 21, 1893, an exploratory incision revealed a dropsy of the gall bladder with one enormous calculus which was removed, and the cholecystotomy completed.

Case 2.—Mrs. H., aged 45, on whom I performed a cholecystotomy, before the post-graduate class, at the Chicago Charity Hospital on August 21, 1894, assisted by Dr. Burdick, in which a dropsical gall bladder contained four large stones and one small stone. There was a history of chronic constipation and clay-colored stools for twenty years, but no other disturbance until a tumor was noticed nine weeks before entering the hospital, when local tenderness and an uneasiness ensued.

Empyema of the gall bladder is caused by the irritation of gall stones, plus infection. There may be quiescent gall stones, (no symptoms of disturbance) until the person is taken ill with some infectious disease, as typhoid fever, etc., when at some stage of its course or during convalescence, rigors come on suddenly and a tumor appears. In November, 1893, I was called to Morden, eighty miles from Winnipeg, to see such a case. A woman aged about 37 years was down nine weeks with typhoid and convalescing, when pain in her right hypochondriac region came on, followed by repeated rigors, high temperature 104.2 degrees, etc., and the appearance of a tumor. The case was so severe that we dared not venture an anesthetic. Her pulse was 130, temperature 102, greatly emaciated, and had not slept for two or three nights. *I performed a cholecystotomy with the aid of cocain.* It was interesting to notice that the skin and parietal peritoneum were the only two structures that required anesthesia. The surface of the gall bladder was insensitive to the needle and knife. In this operation I was assisted by Drs. McConnell and Boyle. We found pus, bile and thirty-two gall stones; some large, others small; washed out the gall bladder, and stitched it to the skin. She made an uninterrupted recovery, but there is still a small fistulous track which is troublesome, although not affecting her general health. I have advised her to come to me, to Chicago to have it treated. It may close itself. Should the enlarged bladder contain nothing but bile, the obstruction in the common duct is not infrequently caused by cancer at the head of the pancreas or sometimes by a pancreatic calculus.

These are the clinical features of some of the cases which call for opening the abdomen for diseases of the gall bladder and obstruction of the ducts. The question now arises which operation to select: Cholecystotomy, cholecyst-duodenostomy or cholecystectomy? The necessity of performing either of them must be on pathologic grounds, and the diseased conditions can not to a certainty be known before the abdomen is opened. We have not had the results of a sufficient number of these operations to make a comparison. From a surgical standpoint, cholecystotomy, in suitable cases, is the most rational, the simplest and safest operation, and if it is capable of rectifying the pathologic conditions it should be the one selected. I should choose it:

1. When the cystic and ductus communis choledochus are normally patulous. The gall bladder may have been enlarged with stones, bile, mucus or pus, which should be cleaned out and the permeability of the ducts tested.

2. When the obstruction can be easily removed from the cystic or common duct through the incised gall bladder.

3. When there is temporary obstruction of the ducts with inspissated mucus, parasites, liver flukes, worms, etc. I met with one case of obstruction of the whole hepatic and the commencement of the common duct with hydatid cysts, which could have been removed by opening the gall bladder and rupturing the little cysts with a probe. The man died on the eighth day, of jaundice. The history of the case was obscure. I did not then (1889) feel justified in making an exploratory incision, which I have since regretted.

4. For the temporary relief of distress and jaundice in obstruction of the common duct by a cancer of the pancreas when the patient can stand but little surgical interference without collapsing on the table.

The first indication includes the majority of gall stone cases. The operation can be done in one or two sittings. The condition of the ducts can best be ascertained when the gall bladder is opened in one sitting. I think, therefore, that this should be done with but few exceptions.

Cholecyst-duodenostomy is without doubt Murphy's operation, and it is a valuable addition to the surgery of the gall bladder. His ingenious and useful anastomosis button is to my mind the best and safest device that has yet been produced, to establish a new route for the bile into its natural receptacle—the duodenum. Up to the present there has been reported but one death and that one from hemorrhage from torn liver, out of thirty-six cases operated on for cholelithiasis. The button in this situation is constantly bathed with an antiseptic fluid—the bile—and the duodenum is comparatively free from germs, which adds to its safety. For the fulfillment of the following indications it is the most ideal operation that has yet been offered to the profession:

1. When the cystic and common ducts are permanently obstructed, and the gall stones can not be removed through the opening in the gall bladder.

2. When the common duct is obstructed by cicatricial tissue.

3. In cases of biliary fistulæ and chronic recurrent cholelithiasis vesicularis.

4. In cases of perforation of the choledochus into the abdominal cavity.

5. In all cases of cancer of the head of the pancreas obstructing the bile duct, unless too weak to stand it.

I have successfully used Murphy's button in the following cases:

Case 1.—On Aug. 3, 1893, at St. Boniface Hospital, I operated on Mrs. McK., assisted by Drs. Hutton, Todd and McArthur. The patient was 58 years of age. There was constant tenderness over the gall bladder, so that the patient could not even bear the clothing; history of biliary colic for four years. Had several attacks in one day. No jaundice. The gall bladder was opened, and I removed one stone. Could feel another in the cystic duct which I could have extracted with forceps, but left it *in situ*. Could feel no irregularities along the course of the common duct. The small sized button was applied and the wound closed. Upon opening the duodenum I could see its mucous rugæ bathed with bile, and I reproached myself for doing that which seemed unnecessary, for the common duct was patulous. She did ex-

cellently, passed the button the eleventh day, and ever since has enjoyed excellent health.

Case 2.—Mrs. J. B., aged 56, troubled for six years with gall stones; jaundiced; found stones in gall bladder, cystic and common ducts; removed stones from gall bladder and cystic duct, but not from common duct. Applied the medium-sized button Oct. 16, 1893, which passed on the eleventh day. Her convalescence was uninterrupted and now enjoys the best of health.

Case 3.—Mrs. K., aged 58; referred to me by Dr. Flemming, of Brandon; suffered for years; became jaundiced. Operated on Feb. 22, 1894; found contracted gall bladder, bound down by adhesions; removed stones from it and the cystic duct; could not pass a probe, nor water down the common duct. Applied a small Murphy button with some difficulty. Had to dislodge the duodenum from its bed. Button passed on the tenth day. She has been restored to perfect health.

Case 4.—Mrs. ——, aged 32, had several attacks of colic; became jaundiced from a severe attack. Had inflammation over the gall bladder. Was the patient of my friend, Dr. Knill, of Detroit, Mich. On my way South I called on my old college mate. Went to see his patient and urged operation, which he had already advised. The next day, March 23, 1894, he cut down to the gall bladder and upon removal of a great number of small stones from the enlarged bladder, the ductus choledochus was found obstructed about its middle and low down. I then inserted the small Murphy button and closed the abdomen. Dr. Knill writes me that she passed the button on the twelfth day and now enjoys perfect health.

Cholecystectomy.—Total extirpation of the gall bladder has been done upward of seventy times with a mortality of about 20 per cent. It has been removed far too often. Its execution is neither simple nor safe, except in those cases where it should not be done. The fact that the gall bladder contains stones, mucus or pus does not call for its removal. The indications which suggest themselves to me are:

1. Cancer of the gall bladder when it has not yet invaded surrounding tissues, and constitutional dyscrasia not marked.

2. Gangrene of the gall bladder.

3. Possibly it may be safer to the patient to remove a small contracted gall bladder, than to incise it or leave it alone, and this only when the common duct is open and transmitting bile. My experience of this operation is limited to one case:

A Mrs. F., aged 50, admitted to Chicago Charity Hospital on Sept. 1, 1894. Referred to me by Professor Waugh. Three years ago she had two or three attacks of colic; was then free from pain till three months before her admission, when a pain which persisted and increased in severity became established. Six weeks before her admission a tender nodular tumor appeared and was enlarging.

Diagnosis: Gall stones with probable cancer. Operation, assisted by Dr. Burdick, on Sept. 3, 1894, verified the diagnosis. Had to remove a V-shape of liver with it. Died three hours afterwards from shock. It was ascertained that there was no hemorrhage. I should not have removed it, for it was too extensive, and she was much weaker than I had anticipated.

What is best to be done to the stones in a contracted gall bladder and to those impacted in the cystic and common ducts? This is an open question. The gall bladder may be removed when the common duct is free. I fancy no exact lines of procedure can be laid down that would cover all cases. A stone in the common duct that is easily crushed should be dealt with in this way, and they are not always hard to break, as shown by Tait. Should they be easily reached and prominent, in a situation where stitching can be accurately done they may be cut out. Should, however, stones obstruct a contracted gall bladder, the cystic duct, and the common duct all in the one case, there is nothing left but to incise the gall bladder, make an effort to crush or remove those in the ducts, establish an omental tract for a drainage tube to the skin, and trust to nature to do the rest. If nothing is done, death from jaundice is certain.

I have performed ten operations on the gall bladder, all successful except the one for cancer of the gall bladder.

There is an operation—cholecystcolostomy—in which the gall bladder is communicated with the colon. For the cure of biliary fistulæ, emitting but a small amount of bile, it may be safely done. It is not suitable for any other conditions. I have noticed the report of three successful cases:

1. By Mayo Robson for biliary fistula in a woman about 40 years of age, whom he exhibited before the British Medical Association at Leeds in 1889. He did the fastening with sutures.

2. Case by Chevasse in October, 1891, using Senn's plates. The indication was for bile fistula.

3. By Mayo Robson, Sept. 20, 1893, used his modified Senn's plates. Case of biliary fistula.

ORAL MANIFESTATIONS IN ARTHRITIC AND GOUTY CONDITIONS.

Read in the Section on Dental and Oral Surgery, at the Forty-fifth Annual Meeting of the American Medical Association, held at San Francisco, June 5–8, 1894.

BY L. L. DUNBAR, M.D.

SAN FRANCISCO, CAL.

When I promised to write upon the above subject I did not know that so much investigation of the gouty diathesis was in progress, or I should have hesitated to add my views to those already published, and although the promise was made prior to the publication of Dr. Pierce's paper, what I have to say has been written upon so much since then by able investigators that my statements can only be viewed in the light of added testimony, instead of original matter. From the mass of evidence presented, I am of the opinion that we have erred as a profession in confounding a series of alveolar manifestations under one head. Ever since Dr. Riggs, of Hartford, Conn., called professional attention to that condition of the dental alveoli known as "pyorrhea alveolaris," and variously by other names as "phagedenic pericementitis," etc., the conditions of the oral cavity have been industriously studied by both dental and medical practitioners, with the result that an entirely new classification of its diseases is impending. For nearly two decades it has been the custom of dental practitioners to ascribe every pathologic manifestation in the alveolar region attended by elongation of the tooth, recession of the gums and wasting away of the peridental membrane, to irritation occasioned by calculus deposits. Almost every practitioner who has been identified with the treatment of so-called pyorrhea alveolaris has assumed the position that the condition was purely local in character, of undoubted calcic origin; differing only in degree of inflammatory and destructive action as the individual constitution is weak or strong.

It is true that mercurial poisoning and scurvy were recognized in their effects upon the alveolar articulation, but these conditions were so rarely brought under the care of dental practitioners that they cut no figure in the study of oral conditions. The influence of heredity was also recognized, but just how this operated was not clearly understood, so calcic it was deemed to be, and as such it has been treated; usually by instrumentation accompanied by local

medication. That such treatment would suffice to remove some of the manifestations where due to calcific deposits at the gingival we all know, particularly when the habits of the individual have been changed by professional direction. But how many cases have been presented with no apparent cause for the condition; which have baffled every effort to relieve when treated as a calcic lesion. In fact, how little is really known by the mass of practitioners of both medicine and dentistry, of the phases of true calcific deposits, or their significance. As is well known, by far the greatest proportion of calculus deposits are harmless, and their precipitation a perfectly natural process. How many realize, however, that there are forms pathognomonic of serious constitutional impairment, presenting in their manifestation diagnostic signs of great value.

The systemic connection in pyorrhea has not been long recognized. The early writers on the subject in most cases adopted the views of Dr. Riggs and his treatment. As this involved asepsis added to the alterative effect of the surgical treatment of the pockets and subsequent medication (usually a mild cautery), much good was done in the early stages of any alveolar lesion of whatever origin. Clinical evidence has not been wanting, however, of its prompt recurrence. In fact, such has been the experience of most practitioners, and many otherwise good men have openly declared that extraction was the only real cure. This has been used as an argument in support of the claim that the disease is local in character, its systemic connection being negatived by the fact that disorganization ceased when the tooth was lost.

I do not now expect to add anything new to professional knowledge in the views I shall advance, and shall premise that I have held the opinions here presented for several years, meeting with success enough in dealing with cases coming under my notice to warrant a closer study of those conditions of the dental alveoli that have been combined under the one title of "alveolar pyorrhea," which simply expresses a phase in the progress of *some* manifestations, as all are not necessarily accompanied by pus; hence the inadequacy of the nomenclature.

Recent investigations will bring us to a full conception of its systemic connection as a local expression of a disturbance in the intercellular fluids. Modern investigation has illumined the domain of cellular morphology, and diseases of all kinds are being traced to their beginnings in the embryonic area. Closely allied to such investigation is a study of nutrition and function.

The "theory of the connective tissue channels" advanced by Moleschott in his "*Krieslauf des hebens*," which was indorsed by Virchow, is of interest in this connection. Moleschott says: "It is one of the grandest achievements of modern times, to the knowledge of which V. Recklinghausen and Virchow have paved the way, that the connective tissue has been raised from the secondary part which at first was allotted to it, to one of productive activity such as was never anticipated; what appeared formerly only designed as a protecting covering or padding appears now as the bed of the most minute and secret streamlets of juices or sap from the blood to the tissues and back from these into the blood vessels; and at the same time as one of the most important nidi or breeding-place of new cells, which developed from the embryonic early shapes can rise to form the most peculiar and special structures of the body."

We lose sight of the fact that in the implantation of the teeth in their alveoli we have an articulation in most of its connective tissue relations the analogue of any other articulation in the body. The same influences are at work here as in other members of the same group, and when we consider the nervous relations of this tissue we are prepared for the statement that the vaguely understood effects of arthritis deformans or rheumatoid arthritis may produce their peculiar destructive effect in a degeneration of the peridental membrane and the alveolar periosteum, as it does in the connective tissues of other articulations.

Drs. Garrod and Weber both ascribe the manifestation of arthritis to trophic influence, which may account for its appearance in one locality, to the exclusion of all other articular surfaces in their immediate neighborhood; as, for instance, in the joints of the plantar and palmar regions and in the maxillary articulations. I submit, therefore, that in view of tissue relations such manifestation may occur in the dental-alveolar articulation. I have seen such cases, and while presenting clinically much the same appearance that we have recognized as alveolar pyorrhea, still an analysis of the animal fluids did not disclose the presence of uric acid. "In all cases of arthritis deformans the serum of the blood has the ordinary properties of the serum of healthy blood, and an analysis of the urine likewise gives negative results, while nodosity is a pathogenic feature in arthritic cases; no deposits of urate of soda are found in any stage of the disease."

Dr. Garrod says that "he is persuaded that statements to the contrary are erroneous," admitting, however, "that it is not impossible that a patient may have had gout in a joint with its accompanying deposits, and that afterwards the same articulation may become the seat of arthritis but this, if indeed it ever occurs is most rare, and would not in any way favor the idea that deposition of urate of soda is a phenomenon of this form of inflammation."

It is not my purpose to enter into a detailed description of the disease known as arthritis deformans, which is the accepted name for the condition, but only to point out a possible source of an oral lesion. Dr. Garrod called the disease rheumatoid arthritis, and gives many reasons for the adoption of this title, but does not lay as much stress upon its tropho-neurotic origin as Weber, who has had excellent results with tonics and the application of the galvanic current to the spine and cervical ganglia.

The morbid anatomy of this disease has been carefully studied by Volkmann and Adams, (see Garrod), and their observations show that from the very commencement of the inflammatory action the articular cartilage begins to suffer, a slow process of absorption seems to take place, the cartilage splits up into fibers vertical to the surface of the bone, little depressions occur which at length coalesce and the bone is left in part uncovered. As the disease progresses the whole surface may be thus denuded, the osseous surfaces brought in contact with each other and in the movements of the articulations they become polished by friction and an ivory-like condition called eburnation is produced. This is the cause of the crepitation in joints so affected, and enables the practitioner to verify his diagnosis in

differentiation with gouty or rheumatic affections. In the earlier stages the disease may be and often is confounded with these two last named inflammations; an examination of the fluids and the progressive character of arthritis, if not arrested, will make diagnosis easy.

Where the manifestation is in the alveolar-dental articulation it probably has its origin in the trophic center in the spinal cord corresponding to the part affected, and I see no reason why this inflammation may not make its first appearance in the dental articulation, as in any other articular surface. To the pocket once formed there is added those septic complications, varying with the habits of the individuals affected, that produce a likeness and make the difficulty of diagnosis greater.

When a better knowledge of the nervous relations of the teeth has been acquired, I feel quite certain that many doubtful oral conditions will be better understood and properly classified. In this connection I am impressed with the necessity for instruction in neurology as a part of the curriculum of our modern dental schools, where scientific training is paramount to purely constructive work.

In reference to gouty manifestations in the oral cavity, the recently published results of the investigations of Drs. Pierce, Kirk, Burchard, Faught and others furnish such a fund of information upon the subject as to leave no doubt in regard to the effects of retained uric acid in the circulating fluids.

In the light of the before mentioned theory of Moleschott, we can understand how the peridental membrane may become the seat of such deposits as urates of lime and soda. The office of the membranous groups represented by the periosteum and pericementum is the deposition of lime salts. In mild inflammatory conditions, not accompanied by perversion of the circulating fluids, there is developed an activity in the pericementum that results in an increased deposition of cement beyond the typal limits of the root in similar inflammations of this membrane, caused by or accompanied with an excess of urates in solution in the circulating fluids. We can understand how a deposition of salts of calcium may be made that would show upon analysis the presence of urates; indeed, we have no assurance that the presence of morbific materials in the blood would not cause the specific inflammation that induces the deposit with its inflammatory coloring.

In my experience, the deposit known as serumal calculus is not removable by any means at our command that would not be equally destructive to the surrounding tissues. In pockets of long standing freely accessible to the fluids of the mouth and to oral *débris*, there may be an added deposit on the surface of a root in granular form that is removable. This, however, is only manifested in the last stages of the disease when re-attachment is doubtful.

Where the pocket is manifested on but one side, and all removable deposit has been carefully taken away, I do not think that the loss of that limited area of peridental membrane offers any barrier to return to health of the surrounding tissue and entire attachment of the tooth.

It was my intention to have presented something more upon the gouty diathesis, but as the ground has been so well covered in recent publications in our professional journals, I shall not hope to bring you anything new, and trust the discussion may more fully develop a subject fraught with so much of interest.

How much the uric acid diathesis has to do with other destructive oral manifestations has not been determined, but I am convinced that some specific acid condition of the circulating fluids is the cause of that mysterious wasting away of the enamel so frequently met with, and which in description of what really occurs, we denominate erosion. What we now recognize as alveolar pyorrhea in its several manifestations, I have shown, or endeavored to show to be due to any one of two or three systemic conditions requiring a different classification and a nomenclature suggesting in part its origin. When this has come to be scientifically developed, an entirely new system of treatment for each will be evolved. Already the study of this subject by dental practitioners has been the means of introducing an entirely new salt of lithium, as an addition to the materia medica. I refer to the preparation known as tartarlithin or lithium bi-tartrate, first made by Dr. E. C. Kirk, of Philadelphia, a practicing dentist and an expert medical chemist. In fact all the information we have up to this time upon the oral manifestations of the uric acid diathesis is due to dental investigation. What the dentist can do for these conditions will depend upon his preparation for practice and his conception of its scope; certainly instrumentation is not to be entirely relied upon. Primarily this was designed to be only a process of cleansing and not instrumentation in its surgical sense. To be entirely successful therefore means a wider knowledge of systematic conditions and also the ability to recognize the pathologic significance of oral lesion. Are dentists properly prepared for such work? Or does the purely constructive or prosthetic secure the largest share of attention in our technical schools? We think that the curriculi of our modern schools of the best class comprise all that is essential for such a training. Where they do not, the instruction in physiology, pathology, and histology can be strengthened; if not, the schools of medicine are open for post-graduate instruction with liberal allowances for work already done, thus enabling the dental graduate to complete his preparation for practice upon its highest plane.

DOUBLE NASAL ATRESIA DUE TO SMALLPOX.

Read before the Mississippi Valley Medical Association, at Hot Springs, Nov. 20, 1894.

BY HANAU W. LOEB, A.M., M.D.
ST. LOUIS, MO.

One-sided nasal atresia due to smallpox is uncommon enough in rhinologic literature, and as double nasal atresia caused by smallpox must be all the rarer, I am prompted to present the details of this most interesting case to the Association. It is all the more desirable for presentation on account of the success of the treatment, and the great relief which the patient has experienced, for we all know the difficulty of maintaining an opening which nature once has closed.

We read, with remarkable monotony, of failure after failure in the treatment of webbed fingers and conditions due to the deposit of scar tissue; we realize quite readily the almost futility of the treatment for the permanent relief of cicatricial contractions and adhesions, resulting from syphilitic lesions of

the pharynx, palate and larynx, so that while no great skill is claimed in the management of the case in point, yet the patient's condition after a year and a half of observation certainly merits attention:

Miss E. T., age 30 years, consulted me first on April 6, 1893, with the following history: Twenty-nine years ago she was subjected to a severe attack of smallpox, which very seriously affected her health. The disease was of the confluent type, and exhibited itself more upon her face than any other portion of her body. There had evidently been a coalescence of a number of pustules over the alae of the nose, and the portion of the lip which is in immediate relation with the nose. Considerable scarring naturally resulted, mainly exhibited on the face, especially in the region of the nose and lips. She had several scars upon her body, arms and lower extremities, but none manifest the degree of cicatrization that is to be found in those upon the face. The result of this loss of tissue was a very decided contraction of the nasal orifices, so that they were no larger than a broom straw.

Five years afterward, an attempt was made by a prominent surgeon to enlarge the openings of the nostrils. For some reason the only effect was to completely obliterate the openings, so that for the past twenty years she has been absolutely unable to breathe through her nose.

Since that time the patient has been in fairly good health,

with the exception that she has been suffering from a dry throat which was especially severe early in the morning; so severe in fact, that she was prevented from partaking of an early morning meal. She suffered very frequently from headaches, which were localized to no particular part of the head. Strangely enough she was not subject to acute pharyngitis though her throat, she said, was a source of continual trouble. She has not been subject to bronchitis, and she has never had pneumonia or any serious illness since her attack of small-pox. During the two years previous to the time she consulted me, her symptoms were somewhat aggravated, and the dryness about her throat had increased. The hawking and clearing of her throat which were almost continually a source of annoyance to her were decidedly increased, and, as she expressed it, she was much sicker during this time than before. She fails to relish her food from a lack of taste.

Examination revealed very plainly the effect of the attack of smallpox. Numerous scars were to be found like the ordinary marks resulting from the disease but, as has been stated before, they were larger and more prominent on the face. Examination of the pharynx showed a chronic inflamed pharynx of a mild type, and with numerous spots of folliculous inflammation. The naso-pharynx was also affected with a chronic inflammation, but the larynx did not exhibit any evidence of disease. It was made very manifest that behind the point of atresia the nasal cavities were open and free, for the patient could easily balloon out the soft parts by forcing air from the pharynx into the nose. In this way too, it could be shown that the overgrowing tissue was perfectly impervious, for the swelling produced by blowing was not reduced until the patient ceased her efforts. The voice was quite clear, and indeed it was only by close attention that an obstruction would be expected.

The patient, having consented to an operation, was sent to the Rebekah Hospital, and upon April 27, Dr. H. C. Dalton operated in the following manner: After aseptic preliminaries, an incision about half an inch long was made through the cicatricial tissue, somewhat larger on the left side than upon the right. It was necessary to make a larger incision upon the left side, from the fact that the left ala had collapsed considerably on account of a greater destruction of the alar cartilage upon that side. The skin and mucous membrane were then stitched together, around the improvised openings, leaving on each side a fairly normal looking orifice. Into each nostril was introduced a rubber tube, devised by myself after the plan of Simrock's speculum, being, however, about one-third larger, and having a larger rim or flange. Into this flange four small openings were made for the purpose of inserting threads. The two tubes were sutured to the adjacent skin, so as to be certain that they would be held in place. The whole was covered with

gauze, and the patient put to bed. She suffered from very slight inconvenience, and after four days the sutures holding the tubes in position were removed, and the whole nose subjected to a thorough cleansing, after which the tubes were re-introduced.

They were now held in position in a somewhat different manner. The thread was placed in the two inner openings, holding them close together, and another thread into each of the two outer openings in the flange and these were carried behind the head and held firmly by a hairpin. This method was found to be eminently satisfactory, very slight displacement being possible. The tubes were easily kept in place, and from their form were not at all inconvenient or uncomfortable to the patient. She left the hospital after three weeks, the wound being entirely healed, and the margin of the new nostrils being smooth and normal. She continued to wear these tubes constantly for three months, being warned of the danger of a reunion of the two sides of the nostrils. In three months she was permitted to leave the tubes out for an hour at a time; later this time was extended. Meanwhile the patient was looking very much better, and as a matter of course, she suffered from no dryness of the throat, and from none of the other symptoms which were so unpleasant to her. Her headaches entirely disappeared, and her sense of smell returned. She was able to

appreciate the odor of flowers three days after the operation.

On March 31, 1894, a second operation was performed upon the left side, as it was evidently not so satisfactory as the right nostril, a fact easily explained when it is remembered that so much of the alar cartilage was destroyed. The incision was carried somewhat higher up toward the tip of the nostril than it had been, and a slightly larger tube was as inserted. This operation has had a decidedly good effect, and now the left nostril is almost as perfect as the right. Since July 1, she has not worn the tubes during the day, now four months. Examination on September 15 revealed no evidence of any return whatever to the original condition. It was suggested to her that she might leave the tubes out altogether, but since she is rather fearful lest her old condition might return, she prefers, at least for the time, to wear them every night.

The illustrations which are presented, exhibit the appearance of the case with the tubes inserted, and the appearance of the nostril a year and a half after treatment. The picture showing the condition of the nose before the operation is not a very satisfactory one, being taken from an old photograph, of some ten years ago.

I am quite certain that the good result in the present case has been due to two circumstances: In the first place the mucous membrane and the skin were united, the skin being rather redundant, and therefore capable of forming a good protection for the margin of the nostrils. If there had been less skin, I am quite certain that the result would not have been quite so pleasing, but with the redundant tissue it was reasonable to expect so good a result. In the second place, the tubes which she wore subjected the nose to no pressure, and maintained their position without any degree of irritation. They fulfilled their function so nicely, that I would commend a similar tube in any case of a like nature.

321 North Grand Avenue.

CASE OF FRACTURE OF ANATOMIC NECK OF THE HUMERUS.

BY E. L. GIBSON, M.D.
STAUNTON, VA.

A 16-year-old boy, of good build, fell about twenty feet into some ladders. I saw him about two hours after the injury; he complained of great pain at the shoulder joint. A slight contusion was seen on the front of the arm at the shoulder joint; I was unable to find any other contusion.

On superficial examination, I thought I had a subspinous dislocation; but the protrusion did not look as large as would be expected. To isolate fracture, I placed the fingers of one hand on the bicipital tuberosities and rotated the humerus; they were felt to move under my fingers; no crepitation was elicited in this way. Dr. J. St. P. Gibson saw him at this time and confirmed my diagnosis. He was given chloroform; reduction was effected by Koker's method after several trials. Rotation was now made and crepitation was very perceptible.

Treatment: Gibson's wire splint, which was described in the Transactions of the Ninth International Medical Congress, Vol. I., page 585, was applied.

By this means, extension was continued for four weeks, at which time the wire splint was removed and a pasteboard crown splint was applied and allowed to remain two weeks. Upon its removal the deltoid muscle was found much atrophied; allowing the head of the humerus to be examined thoroughly. A line of callus could be felt. The joint admitted of all motions without pain and a perfect shoulder is the result. The crown splint will be retained for a couple of weeks longer, allowing slight motion.

SANITARY LEGISLATION.

Abstract of Remarks before the Auxiliary Health Association, Springfield, Ill.

BY CLARKE GAPEN, M.D., LL.B.
KANKAKEE, ILL.

As I look back over the twenty years of my life and work in medicine, I find that nothing has grown upon me more steadily or forcibly than the belief that the future of medicine is to be largely in the field of sanitation. The medical man who has kept himself abreast with the times has seen one line of treatment and one theory after another give way. My worthy preceptor who presides here, twenty years ago taught me many things that to-day he would declare worthless. All of our teachers have taught us much with regard to medical treatment which has since vanished into thin air like the baseless fabric of a vision, but in all this time sanitation has steadily grown in importance until to-day in practical significance it is not secondary to any other thing, even in medical instruction.

The fact that my experience in the line of sanitary work has been somewhat extended and peculiar, is my only excuse for offering ideas of so positive a character as those which I now present. Beginning with an almost absolute sanitary chaos, in a city of

150,000 people, I passed through the experience of the organization of a sanitary department which in the end was practically complete. My first step was to familiarize myself, as far as possible, with what had been done in sanitary work throughout the civilized portion of the world. After doing this and formulating a definite plan, we went directly to the Legislature for the basic law upon which to construct our sanitary organization; and looking back over that work after five years, I now think that that was the wisest thing we could have done under the circumstances. This, you will see, is diametrically opposed to a view which has been expressed here to the effect that the work should be begun with the education of the masses.

In my opinion it is far better to begin work at the other end of the scale. Ideas of sanitation, like all other advanced ideas, must begin at the top and work downward. There is no such effectual educator as law. By that, I do not mean that we should go to the Legislature and get a vast number of statutory laws enacted. Such a proceeding would break down the whole organization which would fall, as it were, of its own weight; but there should be formulated and enacted by the highest legislative authority in the land, laws containing the basic principles of sanitation. This done, you have a foundation on which you can proceed to educate the masses. In all sanitary work the greatest obstacle to be met is the ignorance of the people in reference to sanitation. There is opposition to sanitary work to be found everywhere that it is attempted. It is, however, not malicious. As an illustration, comes to my mind the conditions now prevalent in Milwaukee. The intelligent people of Milwaukee are not opposing the enforcement of the sanitary laws. It is the ignorance of Milwaukee that is opposing and even antagonizing the State law itself. If the authorities there had no surer foundation than the excited state of public opinion that prevails there, the Department could not exist. Such existence as it has is based upon the enactments of the State Legislature. In our work in Omaha, we first formulated the law which was passed by the State Legislature. This law created in all cities of a given class, sanitary departments, and fixed the character of the organizations which should control and operate them. Upon this law the local organization was founded. This local organization then proceeded to enact a sanitary code, which was to be the law of the territory controlled by this sanitary organization. I think that you will find that these three steps will have to be taken in just the order named.

So far as the work of this organization is concerned, I feel that it has not been begun a moment too soon. It should meet again at an early date to formulate a plan and complete an organization which should have an active representative in every locality, and which representative should exercise an influence upon the member of the Legislature from his district, with the object of bringing about during the coming winter a definite legislative result, in the form of such basic laws as are necessary to the organization of sanitary departments in every portion of the State. First in importance, in this legal enactment, should be the recognition of the principle that *sanitary organizations should be based upon State law instead of upon municipal law.* There is nothing so unreliable, nothing so certain to defeat the objects in view as municipal law. Municipal law is one thing to-day, another thing to-morrow. A board of aldermen may formulate a law to-day, which in order to get a particular individual out of office it may repeal within a month. No organization is safe or efficient which is founded wholly upon municipal law in this country.

As to whether each town, city or county should have a board of health is a somewhat open question. I am inclined, however, to think that the existence of a board of health at least in every good-sized town is desirable. In our organization, after much deliberation, we concluded that it was wisest to have such a board in every city of the first class. However, as I have indicated, a good and efficient sanitary department may be operated without a board of health, the head of such department being an officer with power to execute both State and municipal enactments.

Another and most important provision *which should be included in the basic law*, is a provision for the maintenance of the office or department. It should be as impossible for local influences to cut off the support of such department, as it is for them to abolish it. As I look back over the work in Omaha, I feel that this was the one particular in which we fell short. We asked the Legislature for a tax of 1 mill upon every $100 of taxable property for the maintenance of sanitary departments. We succeeded, however, in getting only ½ of a mill. This tax amounted to a sum sufficient to meet the salary of the executive officer and the necessary expenses of the office, but was not sufficient to provide for as extensive sanitary policing of the city as was desirable. The extra provision had to be made up out of the city's treasury by the common council and fluctuated in amount in accordance with the state of feeling existing in that body toward the sanitary department. All who have been engaged in sanitary work in cities know that it is a custom for ward politicians to "load up" the sanitary departments with irresponsible individuals, good for nothing else, and good for nothing there. Attempts to build up a sanitary department upon the basis of merit strictly, are met with opposition from members of the council who have friends for whom they wish to secure soft berths. The statutory provision should make it impossible for local influences to thus cripple a Health Department. I mean by this, that taxes for the support of a sanitary department should be levied in the same manner as the school taxes are levied. It is impossible for a city council to reduce the school tax below a given point, and this should also be true with reference to the funds necessary for the support of sanitary departments. I think, however, that at this point State interference should cease, just as State interference ceases in reference to school matters when it has made the maintenance of schools obligatory upon each town or city, and has made provision for their support by taxation. The appointment of the executive officer of the board or department of health should therefore, in my opinion, rest with the mayor, and the term of office of this official should be co-existent with the term of office of the mayor. There are two methods of forming a board of health. The one being the appointment of worthy citizens to compose the board who have no direct connection with the city's affairs. The other is by forming the board of officers who have a direct connection with the city's affairs. Of these two

methods, I prefer the latter, for the reason that officers who have a direct and paid connection with the city's affairs are much more likely to give attention to them and to keep themselves familiarized with them than the other class of citizens whom I have mentioned. To my mind, an ideal board of health should be composed of the mayor, chief of police, two representatives of the common council and a commissioner of health, who shall be the executive officer of the board.

The next step is to formulate a sanitary code. I spent some nine months studying the sanitary codes of the various cities of the world before formulating the code adopted by the board of health in Omaha, and acquired what was to me, some very interesting information. The first thing that impressed me was the wide difference between municipal government in this country and in Europe, for example,—the city of Birmingham in England, has a municipal government which is said to be a model one, that costs less than $5 per capita per year, and the superb city of Munich is maintained at about $13 per capita. The municipal administration of the city of New York costs about $25 per capita, or five times as much as Birmingham, and as every one knows is most inefficient and corrupt. The same may be said of most of the large cities of this country. In my opinion the next great reform that will sweep over this country will be municipal reform.

Model sanitary departments are found in Berlin, Munich, Glasgow, Birmingham, and numerous other European cities, but are to be found in none of our American cities. Glasgow has one of the best health organizations in the world, which deals with exceptionably difficult sanitary problems, and is maintained at a cost of about $500,000 per year. In this country, the model State board of health, and in fact, the only State board of health that exists with anything like full powers and support is that of Massachusetts. The States of Minnesota and Michigan each have, however, health departments worthy of study and consideration. In the great State of Illinois with a population of 6,000,000 people; a State possessing the greatest resources of any State in the Union, perhaps, the members of the State Board pay their own expenses. Provision should be made to maintain in this State a board of health in keeping with the character and resources of the State. A sufficient provision should be made to pay the members a per diem for actual service and to maintain an office, chemic and bacteriologic laboratories, and all necessary medical and other skilled supervision, and to insure competent sanitary inspection wherever needed. In short it should be provided with authority and support.

The State Board of Health of Massachusetts maintains at Lawrence a complete department for the examination of water, and this department has contributed more to the knowledge of the purification of water than any other body of scientific workers in the world. It has furnished the facts upon which water purification is based all over Europe to-day, though, strange to say, these facts have so far excited comparatively little influence in this country. A department is also maintained in connection with the Boston Polytechnic Institute for the examination and study of foods. To the water department may be sent the water of any village or farm-house and the people may know whether they are drinking safe water or not. To the food department the citizen may go for information in reference to all questions of food adulterations. An organization should be effected whose voice will be heard from the northern boundary of the State to its southern limit, demanding in language that can not be misunderstood that something may be done in relation to sanitation worthy of our great State.

ORIGINAL INVESTIGATIONS ON THE NATURAL HISTORY, (SYMPTOMS AND PATHOLOGY) OF YELLOW FEVER. 1854–1894.

BY JOSEPH JONES, M.D., LL.D.
NEW ORLEANS, LA.

(*Continued from page 55.*)

CHAPTER III.

None of the tables in the article of Dr. Faget support the assertion in the article, "Fevers," of the new French Dictionary of Medicine (1871): "In some fevers the remission is long and complete, as in yellow fever, for instance, in which the *initial attack* is separated from the *terminal fever* by a *remission* of one or several days duration." (Vol. XIV., p. 742.) On the contrary, according to Dr. Faget, "yellow fever shows *one single effervescence*—only *one paroxysm*, never a true remission, and the *unique attack* subsides immediately. Its progress is regressive as soon as it appears. This last peculiar feature would not show as plainly in our tables, but for the fact that they often begin after the second and even third day. The fact is that the decline is marked from the very beginning, in the line of the fever only; as for the temperature we shall see that it even increases, at least, in two-thirds of the cases during the first two or three days. . . . The thirty-eight observations of 1870 also contradict the opinion concerning the *short duration* of yellow fever. According to La Roche's opinion, based on immense learning, it would be three days (3×24=72): A febrile stage of about seventy hours' duration, more or less, is succeeded by a period of complete cessation of fever (Vol. I., p. 426). Judging from our tables, it should be six or seven days (6×24=144 hours): "The maximum of temperature in yellow fever, in New Orleans in 1870, has been, in the average of cases, 104.1 degrees. Such is the average maximum of fevers in general; there is, therefore, in this, nothing peculiar in yellow fever. The particular and special feature is that: 1, this average maximum of temperature is very rapidly reached in yellow fever cases. In about one-third of our cases (twelve in thirty-eight) the maximum has been reached on the very first day; in one-fourth of the cases (nine in thirty-eight) it was on the second day; in another third of cases (fourteen in thirty-eight) on the third day; and in three cases the disease had gone over three days before reaching its maximum, and it went on steadily decreasing till it reached the normal standard, and even below that point, except in cases where special circumstances or accidental causes easily accounted for, such as secondary congestions appeared. Thus we can say that there exists no stationary stage in yellow fever. The decrease of the temperature has been remarkably slow. Up to the fifth day it had not yet reached the normal standard in most of our cases.

The exceptions were such as were very mild, or such as proved rapidly fatal. In twenty or thirty the thermometer registered 100 or 102 degrees on the fifth day. . . .

"In short, the march of the temperature in our tables is marked: 1, by a period of increase, very rapid and of very short duration; and 2, by a period of decrease, rather slow and long. There is no sign of a true stationary stage. Thus the study of temperature in yellow fever offers for our consideration only an effervescence and a defervescence. . . .

"I shall sum up in saying that, the march of the temperature in yellow fever, as shown by the graphic lines representing it, is characterized by a unique paroxysm with an effervescence of one to three days, followed by a defervescence of four to seven days, without any stationary stage. . . .

"We consider that we are now authorized to say that in yellow fever we are able, in the majority of serious cases, to detect from the beginning of the fever, one of its most precious diagnostic signs, and that is the divergence of the lines indicating the march of temperature and pulse. The line of the pulse descends immediately, while the line of temperature ascends, and that during one, two or even three days. . . .

"But I shall insist upon saying that the direction of the lines of temperature and pulse is of special importance in the incipient stage of the febrile paroxysm of yellow fever, in view of the diagnosis of the disease. In the great majority of serious cases, the line of pulse descends, while the line of temperature ascends. Are we not justified in our belief that there very likely exists no other disease in which the same occurrence obtains? . . .

"Let us now consider the specific character of yellow fever, which shows itself in our opinion, by the action of its morbific principle on the heart, this action being denoted by a diminution in the number of pulsations from the very beginning.

"In the work that I published on yellow fever in 1859, after having studied the progress of the fever, without the thermometer, guided only by statistics of the pulse, and those statistics compiled from at least a hundred observations, taken by a dozen physicians during the epidemics of 1839, 1853, 1858, I expressed myself in the following manner (p. 85):

"In all these observations written at the bedside of the patients during three different epidemics in New Orleans we perceive, nearly without exception, that the pulse at its *apogeum*, from the first day gives even more than 100, sometimes 110 and 120 pulsations; begins to fall the second day, continues to decrease regularly the third, and gives from that time 70 to 80, sometimes much less."

"The regular and rapid decrease of the pulse is such in yellow fever, from a record of a hundred observations, that we could recognize it as the true characteristic of that fever.

"To-day, after the epidemic of 1870, that is to say, after having been able to study the progress of yellow fever, not only with the 'independent second watch,' but at the same time with the thermometer, I think further hesitation is impossible; the diminished frequency of the pulsations, that is to say, the heart's action, show themselves from the beginning in yellow fever, and consequently in the height of febrile excitement, as certified by the thermometer. This is the essential characteristic of this fever, and, in fact, a like decline of the pulse is not a simple abatement of the fever, since it occurs in the great majority of cases during the increase of temperature. We find, then, a diminution of the beats of the heart, produced by a direct specific action of the poison itself of yellow fever, in the central organ of circulation. This specific action of yellow fever poison on the heart can be compared to the effect produced on that organ by certain poisons, as, for instance, digitalis and veratrum viride. . . .

"Now the specific character, clinically demonstrated has just received the most remarkable anatomic confirmation in the observations upon yellow fever (just published by Prof. Joseph Jones, of the University of Louisiana). This is what he says on page 8 of his pamphlet: "The central organ of circulation is structurally altered and enfeebled in yellow fever, the muscular structures of the heart present alterations similar to those observed in the liver and kidneys. Oil, granular, albuminoid, or fibroid matter is deposited within and around the muscular fibrillæ, and the organ after death presents a yellow flabby appearance. These lesions of the heart, shown by careful *post-mortem* examination, are characteristic of the disease." . . . . The general table of the average of the pulse, furnished by Blair, like ours of New Orleans, not only shows the steadily decreasing character of the pulse in yellow fever, but it also demonstrates beyond a doubt that this fever has but one paroxysm, and consequently it is a continued fever, continually decreasing but still continued. . . . . "If, then, yellow fever remained a fever with but one paroxysm, in Guiana as well as in New Orleans, it proves it not only to be a continued fever, but one that resists efficaciously the concomitant influences of malarial fever.' (Type and Specific Character of True Yellow Fever, *New Orleans Med and Surg. Journal*, September 1873, pp. 145–168.)

Dr. D. D. Saunders, of Memphis, Tenn., in his valuable "Observations on the Yellow Fever Epidemic of 1873 at Memphis, Tenn.," gives a tabulated record of the pulse and temperature in seventy-three cases of yellow fever. The daily average of the temperature and pulse, was as follows: First day temperature 102 degrees; pulse 114½. Second day temperature 102.5 degrees; pulse 112½. Third day temperature 102.2 degrees; pulse 107¼. Fourth day temperature 102 degrees; pulse 96½. Fifth day temperature 102.2 degrees; pulse 86½. Sixth day temperature 101.5 degrees; pulse 74. Seventh day temperature 99.5 degrees; pulse 69¼. Eighth day temperature 99 degrees; pulse 68. Ninth day temperature 97.8 degrees; pulse 64⅜. Tenth day temperature 98.1 degrees; pulse 65½. Eleventh day temperature 98 degrees; pulse 67¼. Twelfth day temperature 98.2 degrees; pulse 71⅜. Thirteenth day temperature 98.5 degrees; pulse 80. Fourteenth day temperature 98.5 degrees; pulse 82.

In ten fatal cases the daily average of the temperature and pulse was: First day temperature 105 degrees; pulse 120. Second day 105.5 degrees; pulse 120. Third day temperature 105.7 degrees; pulse 116½. Fourth day temperature 106.5 degrees; pulse 114½. Fifth day temperature 104.6 degrees; pulse 106⅜. Sixth day temperature 103 degrees; pulse 100⅜. Seventh day temperature 102.8 degrees; pulse 99. Eighth day temperature 101 degrees; pulse 99½. Ninth day temperature 97.5 degrees; pulse 81. Tenth

day temperature 99 degrees; pulse 100. Eleventh day temperature 98 degrees; pulse 120. Twelfth day temperature 97 degrees; pulse 130. Thirteenth day temperature 96 degrees; pulse 130.

Of the ten fatal cases, five died on the fifth day of uremia; one died on the sixth day, of uremia; one on the seventh day, of nervous prostration; one on the ninth day, of uremia; one on the tenth day, of uremia; and one on the fourteenth day, of uremia. No case of uremia lived over fifty hours, after urinary suppression set in.

Dr. Saunders remarks: "The tables accompanying this report show yellow fever to be a full fledged fever within a few hours after its initiation, and the circulation is as rapid then as it ever gets to be unless complications arise, as in the winding up of the fatal cases. The pulse begins to diminish in frequency within a few hours of the beginning of the fever, and in the stage of convalescence will descend below the normal standard. I saw it descend to thirty-six beats per minute and the patients recovered. The temperature, however, will generally either hold its starting point, or gradually ascend from 72 to 120 hours, and then if there are no complications, begin a gradual descent with the pulse, and go below the normal standard of 98.5 degrees in convalescence. I saw the thermometer descend below 95 degrees, and the patient recover. In these cases when the pulse and thermometer descend gradually together, after the second day, no apprehension of danger need be entertained; they will always get well. Such was the result of my observation. . . . . I saw no case of yellow fever recover when the thermometer marked over 106 degrees, on the first and second visits, and I saw no fatal case when the pulse and the thermometer gradually descended together below the normal standard.

"I believe with Prof. Joseph Jones, that when the temperature ranges very high from the first, the patient may die suddenly, overpowered by the poison, as in cases of sunstroke."

The results obtained by Dr. R. W. Mitchell,[47] of Memphis, Tenn., and by Prof. Samuel Logan[49] at Pensacola, sustained those previously announced by Blair and others. Dr. Mitchell gives a valuable table of the daily variations of the pulse and temperature in forty-eight cases of yellow fever, the general results of which will be more fully examined hereafter.

With this general historical introduction we will proceed to present specific details and the results of original investigations. The general results of my investigations upon the changes of temperature and conditions of the pulse in yellow fever may be formulated thus:

The maximum elevation of temperature is attained upon the first, second, and third days of the disease; ranging, according to the severity of the attack, from 102 degrees to 110 degrees in the axilla; and, as a general rule, from the third to the fifth day steadily falls and sinks down to the normal standard, and even below. In some fatal cases it rises again toward the end, rarely, however, reaching or exceeding, during the stage of passive hemorrhages, black vomit, jaundice, and urinary suppression, 104 degrees, and, as a general rule, never attains the high degree of temperature characteristic of the first stage. The supervention of an inflammatory disease, or the occurrence of an abscess, or the access of malarial fever, after the first stage, may in like manner cause a progressive elevation of temperature, with slight evening exacerbations.

The pulse at the commencement of the attack is rapid and full. The frequency of the pulse does not, however, as a general rule, continue to correspond with the elevation and oscillations of temperature, as in many other febrile diseases; and in many cases of yellow fever the remarkable phenomenon is witnessed of the pulse progressively decreasing in frequency, and even descending below the normal standard, while the temperature is maintained at an elevated degree; and on the other hand the pulse frequently increases in frequency, but diminishes in force, near the fatal issue. The occurrence of copious hemorrhage from the stomach or bowels may be attended with sudden depression of temperature, and increase in frequency with diminution in the force and fullness of the pulse.

The remarkable progressive decrease in the beats of the pulse after the first stage in many cases appears to be due to several causes; as the anatomic changes in the heart (acute fatty degeneration), and the retention in the blood of the bile and urinary constituents.

If the temperature rises in the first stage above 105 degrees, the patient is in imminent danger; and if it reaches from 107 degrees to 110 degrees, death is inevitable, whatever may be the treatment adopted. In cases attended with the rapid rise of the temperature to 106 degrees and beyond in the first stage, death sometimes occurs suddenly, and apparently solely from the effects upon the blood and nervous system of the great elevation of temperature, as in sunstroke. The truth of this statement will best be illustrated by actual observations, and especially by the following case, which has recently occurred in my private practice:

Mrs. W., aged 28 years, has resided in New Orleans eighteen months; large, well-developed, with clear complexion and high color in health. Mrs. W. called at my office July 21, stating that she had just passed through the menstrual period, which had been protracted for ten days, was very profuse, and had confined her to bed. She complained of great weakness, "heaviness" of feeling, vertigo, and pain in the head, back, and limbs, symptoms which appeared to be attributable, at least in part, to the hemorrhage, as I had attended her upon previous occasions when suffering with analogous symptoms resulting from profuse menstruation. July 22, 1 P.M., I was called to Mrs. W., and found her suffering with slight febrile excitement; pulse 90, full and strong; face flushed; pain in head, back and limbs. July 23, 9 A.M. Face greatly flushed and of scarlet hue; capillaries of the extremities and face and surface generally congested; patient greatly agitated and alarmed: says she has yellow fever, and will surely die. It was difficult, if not impossible, to calm her fears. Skin warm, but bathed in profuse perspiration; pulse 108, full and strong; great pain in back and head. 3:30 P.M., pulse 110; temperature 103.5 degrees; urine abundant, light yellow, slightly turbid from presence of vesical and vaginal mucus; a trace of albumen. Menstrual flow returned for an hour or two during the morning, but ceased again; capillaries of the surface intensely congested; tongue red at tip and edges, furred in center. July 24, 9 A.M., pulse 118, respiration 30, temperature 106.8 degrees; skin hot and dry. The fever rose in the evening; patient talked and muttered in her sleep, and frequently awoke suddenly with a start and cry; moans and sighs with every breath; is greatly agitated and alarmed; declares the case is utterly hopeless, and that her lower extremities feel as if they were paralyzed. Pain in head, back, and limbs intense; nausea constant and distressing, but no vomiting; heavy, disagreeable odor emit-

Note—New Orleans Medical and Surgical Journal, 1874, p. 791.

[47] Yellow Fever in Memphis in 1873, by R. W. Mitchell, of Memphis Tenn., Richmond and Louisville Medical Journal May, 1874.

[49] Bedside Notes on the Pulse, Temperature and Urine, in cases of Yellow Fever observed at Pensacola Navy Yard, in the fall of 1874, New Orleans Medical and Surgical Journal, May 1875, p. 779.

ted by the body, as in yellow fever; great congestion of capillaries; face and hands of a scarlet hue; an eruption has appeared upon the forehead; the surface of the face, trunk, and extremities is as highly injected and as red as in scarlet fever or measles, but the brilliant redness is more uniformly diffused over the surface than in either of these diseases. Urine abundant; light-yellow color; specific gravity 1020; contains a small amount of albumen, with detached cells from the tubuli uriniferi and yellow granular casts, together with vesical and vaginal epithelium. Upon standing, the urine let fall a moderate deposit of urates of ammonia and soda, mingled with the cells and casts. 3 P.M., pulse 108, respiration 36, temperature 106.3 degrees; skin hot and dry; face and surface generally of a deep scarlet hue; pressure drives out the blood from the capillaries and leaves a white spot, into which the blood slowly returns. Tongue coated in center, with yellow fur and red at tip and edges; swollen, with margins indented by the teeth; moist and soft. Nausea, depression, fear of death, and bad odor from the body unchanged. 9 o'clock P.M., pulse 112, temperature 106.2 degrees, respiration 38; moans and sighs with every breath; when spoken to answers rationally, but often slumbers, starts, and jumps in a delirious, nervous manner; odor from the body heavy and offensive.

July 25 10 A.M., condition unchanged; pulse 118; full and strong; respiration 36; temperature 108 degrees. The delirium and restlessness of the patient prevented thermometer being held well in the axilla; the actual temperature was therefore somewhat above 108 degrees, and probably reached from 110 degrees to 113 degrees in the cavities of the heart. Conjunctivæ congested; gums red and spongy; odor of body very offensive; surface of face, trunk, and extremities greatly congested and of a brilliant scarlet hue; forehead covered with a distinct papular eruption. Urine light colored; specific gravity 1020; contains albumen in considerable amount, numerous granular casts of tubuli uriniferi, kidney cells, granular yellow albuminoid matters, and amorphous deposits of urates of ammonia and soda. Two hours after I was summoned to the bedside of the patient, and found her in *articulo mortis;* pupils contracted; spasmodic respiration, with death rattle in throat. I was informed that she had started suddenly in a disturbed sleep, made several ineffectual efforts to vomit, and passed immediately into this state. She was unable to swallow. Sinapisms were freely applied, but without effect.

The treatment of this case will be briefly mentioned, although we are not now engaged with this subject. The bowels were first opened with a saline cathartic, followed by quinin. Rest was then promoted by Dover's powder. The bowels were afterward kept open by means of enema. The diet was light but nutritious, and administered in small quantities at regular intervals; the action of the kidneys was promoted by the use of gentle diuretics, as orange-leaf tea and water charged with carbonic-acid gas. Quinin aggravated the delirium, and was abandoned at once. Alcoholic stimulants were found in like manner to aggravate the pain in the head, the nervous excitement, and delirium. Cold wet cloths were applied to the head, and the surface bathed with tincture of camphor and water.

In the last moments of life the scarlet flush of the surface gradually faded, and at the moment of death, which occurred at 1 P.M., the surface presented a yellow jaundiced hue; after death, body mottled; decomposition rapid. I attributed the death of this patient to the high degree of heat and the consequent disorganization of the blood and derangement of the nervous and muscular forces consequent upon the action of the febrile poison.

(To be continued.)

Two Hundred Years' Theses in Paris.—The number of theses for Doctor of Medicine defended before the Paris Faculty of Medicine from Dec. 18, 1794, to July 31, 1894 is 28,793; to these must be added 793 theses for "agregation," and 220 theses for professional honors, or a total of 29,806. The theses for "agregation" were in vogue for sixty years, from 1825 to 1886; those for professors about half that period.

HOSPITALS FOR THE INSANE — THEIR SCOPE AND DESIGN.

BY EDWARD F. WELLS, M.D.
CHICAGO.

(Continued from page 41.)

THE INSTITUTION.

Capacity.—The first questions to be asked in designing an institution for the insane is, What shall be its initial, and what its ultimate capacity? If these are to be the same it may be constructed upon rigid lines; if both are known only a limited degree of flexibility of design is necessary; but if, as is usually the case, the initial capacity is known, while the ultimate capacity is a decidedly unknown quantity, then the design should be so elastic that future extensions may be economically made, to any reasonable extent, without marring the symmetry or incurring any loss of balance. The truth of this proposition has been so often demonstrated that it should not only be frankly acknowledged, but heeded as well. Without going into any argument upon the subject, we should also acknowledge the fact that the irresistible tendency of the times is toward large institutions. The day of small State insane hospitals has long gone by, never to return—they offer no advantages and can not be afforded.

The question of capacity, initial and ultimate, should receive careful consideration in connection with the proposed new hospital for the insane in Illinois. It is clear that the initial capacity should provide for present needs, plus the probable increment during the period of construction, and the subject of present requirements will first demand attention.

There were, in 1880, in Illinois, 5,121 insane persons. In 1890 there were 6,638 insane, an increase equal to about 3 per cent. per annum. A continuance of this rate to the present time would indicate that there are now 7,534 insane persons in the State. Dr. Bettman, President of the Board of State Charities, estimates the number at 7,000. If the increment continued at the same rate during the construction period of a State hospital—estimated at two years—the number would be 7,932.

The comfortable capacity of the four State, and one large county, hospitals, together with the number of inmates now present, and with the overcrowding, as represented by the excess, is shown below:—

Hospital.	Capacity.	Inmates Nov. 19,1894.	Excess.	Deficit.	
Kankakee. .	2,000	2,090	90		
Jacksonville	1,200	1,222	22		
Elgin	1,100	1,115	15		
Anna	946	853		93	
Dunning . .	900	1,067	167		
Totals . . .	6,146	6,347	294	93	Corrected excess 201.

In 1892 there were in the county almshouses of the State—outside of Cook County—848 insane persons, distributed as follows:—

In the counties composing the Central Hospital District, 425; Northern, 167; Eastern, 158, and Southern, 98.

That these numbers have not decreased since that date is made clear by the investigations of Dr. J. F. McKenzie, Superintendent of the Central Hospital, who writes me as follows:—

"In the thirty-three counties composing our Lunacy District there are something over five hundred insane persons confined in poorhouses and jails. This fact I learned by sending a circular letter to the county clerks of the different counties."

It is quite probable that a canvass of the counties of the other hospital districts would disclose a corresponding increase in the unprovided-for insane.

Taking, then, the 848 insane in the almshouses, plus the probable increase of 144 and the hospital excess of 201, and we have a total of 1,193 insane persons in Illinois who urgently need hospital care at the hands of the State. The number will have considerably increased before the end of the building period.

Taking all these, and other facts into consideration, it is a reasonable opinion that the proposed new hospital should have an initial capacity for, at least, 1,200 patients, and that the growing demands of the State will require an ultimate capacity of, certainly, more than two thousand. These figures, instead of appalling our authorities should lead, instead, to careful consideration and judicious action.

Location.—It will have been noticed that the Southern Hospital has a capacity for 946, with only 853 inmates. It can accommodate 93 more than it does, and this is nearly equal to the number of the insane in the almshouses of the Southern District in 1892—98, or the probable present number, 114. The slight excess indicated could probably be best provided for by transferring the twenty-six insane of Clark County to the Eastern District. The almshouse contingent and hospital excess—dividing that of Cook County as provided by law—of the other districts would be about as follows:—Central, 522; Northern, 266; Eastern, 412; total, 1,200. A glance at the map, with due consideration of the present hospital districts, distribution of population, lines of transportation, etc., will show that the proposed new hospital should be given a district composed of the northern counties of the present Central District; the northwestern counties of the Eastern District, and the western counties of the Northern District.

The hospital should be centrally located and be conveniently accessible to all parts of the district it is intended to serve. It should be near some town or city of moderate size. The water supply should be of good quality and practically inexhaustible. Facilities for drainage should be perfect. Proximity to a cheap fuel supply and adequate railroad facilities are very important. These are of such vital importance that no site should be even considered which does not fulfill, absolutely, the first four requirements, and meets, fairly, the last. There are many other circumstances which will recommend one site above another, but these can not be considered.

Water Supply and Drainage.—In the matter of water supply the history of so many public institutions has been unfortunate that I feel the subject worthy of special mention and emphasis. As stated above, the water supply should be inexhaustible and the drainage perfect. The water supply plant should be designed for furnishing water at the minimum rate of 100 to 300 gallons per patient daily, and the system of drainage should easily dispose of the resulting effluent. Furthermore, inasmuch as the history of our State institutions show that they almost inevitably undergo enlargement, the mains for water and the trunk lines of sewer should, from the first, have a capacity of, at least, double that of the initial capacity. To meet the contingencies of possible accidents, two pumps should be provided.

Design.—Within a period of time easily compassed by the memories of persons yet living, three distinct systems of insane hospital construction have, in turn, found favor at the hands of superintendents and building commissioners, viz., the corridor, the cottage and the detached pavilion. The long gloomy corridor; the heavy-laden atmosphere, and the constantly occupied ward have condemned the Kirkbride plan. The great cost of construction, and of maintenance, together with the impossibility of exercising any efficient supervision have made the cottage hospital unsatisfactory. The objections urged against the cottage system apply to the detached pavilion. The last two are free, in principle, from the radical and inherent sanitary defects of the first named.

Progressive managers of hospitals for the insane, in common with other enlightened directors of public economic affairs, have been, and always will be, eager to adopt that which all the world is seeking—the "something better"—and to the credit of these managers it may be said that there have been very few examples of retrograde movement in the construction of American institutions of this class.

Although not often formulated there can be no difference of opinion as to the fundamental requirements for the modern State institution for the insane. It must be healthful; it must conduce to the curability of insanity; it must afford facilities for minute classification; it must protect patients from injury; it must protect attendants from unjust accusations; it must permit efficient supervision by day and by night; it must be susceptible of convenient administration; it must be of economical construction; and, finally, it must favor economical maintenance. These requirements are not of an extraordinary nature—on the contrary, they are essentially commonplace, and common-sense—and they may be had in combination without sacrificing in any degree their individual excellence. Certainly, every new hospital should demand and receive the highest obtainable excellence in each and every one of these particulars.

Facilities for Supervision.—The wards should be so arranged as to permit efficient supervision, without increasing the cost. A closer system of supervision has always been desired by hospital managers and various expedients have been resorted to in the endeavor to improve upon ordinary methods. Thus there has long been employed at Norristown, near Philadelphia, a system of supervision by an inspector, who occupies a small chamber between two wards, elevated above the second floor. From this chamber the occupant commands a view, directly, of the two upper wards, and, by means of a tube and an arrangement of mirrors, of the two lower wards—in all, four wards. Of this system the Committee on Lunacy of Pennsylvania have to say in their report for 1891:—

"With the added experience and observation of another year your committee are firmly convinced that the present method . . . of supervising the duties of those who daily attend the inmates should be improved. The so-called inspectory system established by the superintendent of the male department of the Norristown Hospital, whereby inspectors control a view of the wards and occupants at all times, has continued in successful operation for several years past. . . . Your committee have been watching with interest the practical working of this system and further observation of the results, as compared with the usual methods of supervising attendants on duty, has led us to a favorable opinion of the inspectory system and, we recommend to the earnest consideration of the trustees and superintendents of other hospitals this, or some other plan for the better protection of the patients from violence, injury, or any dangerous coercion, and the attendants from groundless accusations."

The Norristown system may be extended and simplified by centrally locating the supervisor's office, with respect to a group of four or eight wards, and placing it about four feet below the second floor so that a person occupying it may have a view of all the

wards on both floors. This room, being open to view and occupied by an ordinary officer changes the system from one of espionage to one of close supervision. However, the system is so elastic that any degree of oversight—from the closest surveillance to none—may be had at will.

Insane inmates of hospitals have their comfort and safety jeopardized at the hands of themselves, their fellows and their attendants. These dangers become greater in proportion to the distance the patients are removed from official supervision and control. The plans under which institutions for the insane are usually constructed remove a large proportion of the inmates—and often those who particularly require close surveillance—far from the seat of official authority and necessarily prevents that careful supervision which their interests demand. Under the modification proposed, the officers in authority are centrally located and have at all times—day and night—opportunity to see every ward and occupant and exercise a close, constant and immediate supervision over attendants and patients, guarding the latter and detecting negligence, unkindness and cruelty upon the part of the former, and protecting them from unjust charges.

Radiate Pavilion Wards.—To facilitate supervision and night attendance; to render administration more convenient, and to cheapen construction and maintenance, some of the buildings of such an institution may take the form of radiate pavilions.

The earliest examples of hospitals upon the radiate system, so far as my information extends, date back to, or beyond the twelfth century, when two were erected in France; one at Angers and the other at Chartres. During the war a very large hospital of this class, with a capacity of about thirty-two hundred, was operated at Washington, or Philadelphia, and was considered a model. The Marine Hospital at San Francisco, designed by Surgeon-General Hamilton, has some wards arranged in this manner. The model hospital exhibited at the World's Fair by the United States Government was upon this system. The Southern Indiana Hospital for Insane, at Evansville, is a notable example of this form of arrangement of wards for patients of the classes under consideration. Of the Evansville Hospital, the Indiana Board of State Charities have this to say—in advance of the opening of the institution—in their report for 1890:—

"The building is on what is known as the radiate plan, which is original as applied to hospitals for the insane. Its leading feature is that of bringing each section into equally close connection with the administration department, while still giving the advantages of light and air on all sides of every ward. It is expected, with reason, that this plan will be found to facilitate supervision and promote economy in the domestic arrangements, heating, water supply, etc."

After the hospital had been occupied for two years, the same Board says:—

"The internal affairs of the hospital have been remarkably free from disturbances of any kind. . . . It is possible that this condition of things, which must be recognized as more than ordinarily favorable, is partly due to the construction of the building. . . . It was designed, as is well known among persons who study hospital construction, by Dr. Rogers, and was the result of the careful study and experience of a very practical man. His opinion was that the radiate plan . . would be moderate in first cost, economical in maintenance and particularly easy of supervision. The experience of the last year has certainly borne out all he claimed for it as far as maintenance and supervision go."

Later, and after four years' use of the hospital, Dr. Thomas, the medical superintendent, writes me as follows:—

"There are three things claimed for the radiate plan of hospital . . . 1, economy in construction; 2, economy in maintenance; 3, convenience of administration. The first claim has not been proven in the construction of this building, but in another building extravagance may be avoided. The second and third claims are absolutely proven to the most satisfactory degree. In my opinion the radiate plan has decided advantages over both the Kirkbride and the cottage plans."

Attendants.—The proportion of attendants to patients which is to be allowed will have an important bearing upon the number, size and arrangement of the wards. In a large State institution for the insane, where the interests of the tax-payers require the practice of as rigid economy as the proper care of the patients will permit, the wards might well vary in capacity from fifteen to thirty-two and be cared for by two attendants. To be sure, in practice, these numbers will vary according to circumstances. The practice in different hospitals may be inferred from the following table and statements:—

State.	Hospital.	Patients.	Attendants.		Proportion.	
New York	Poughkeepsie	733	105	1	attendant to 7.0	patients.
"	Binghamton	1,136	157	1	" 7.2	"
"	Middletown	709	80	1	" 8.8	"
Indiana	Indianapolis	1,524	138	1	" 11.0	"
"	Richmond	434	39	1	" 11.1	"
"	Logansport	364	32	1	" 11.3	"
Minnesota	Rochester	631	49	1	" 13.0	"
Kansas	Osawatomie	519	39	1	" 13.3	"
Ohio	Toledo	1,174	88	1	" 13.3	"
"	Cleveland	807	52	1	" 15.5	"
"	Athens	813	51	1	" 16.0	"
"	Dayton	732	46	1	" 16.0	"
"	Columbus	1,091	66	1	" 16.5	"
Illinois	Anna	865	75	1	" 11.4	"
"	Elgin	1,115	80	1	" 13.9	"
"	Kankakee	2,090	160	1	" 13.0	"
"	Jacksonville	1,222	80	1	" 15.3	"
Totals and averages		15,998	1,317	1	" 12.2	"

At Dayton there are twenty wards with an average capacity of over thirty-six patients. Sixteen of these have two attendants each, and four,—the sick and violent wards on either side—have three each. At Logansport there are fourteen wards with an average capacity of twenty-six patients. Ten of these have two attendants each, and four have three each. At Richmond there are nineteen wards, ranging in capacity from ten to thirty, with two attendants to each ward, except one ward, which has three. At Jacksonville there are thirty-six wards, with two attendants to each, except four disturbed wards on which three attendants are employed. At Elgin there are two attendants to each ward, except on five, where there are three each. At Anna, two wards have one attendant each; twelve wards two attendants each; nine wards three attendants each, and four wards four attendants each. At Kankakee four wards have one attendant each; fourteen wards two attendants each; six wards three attendants each; seven wards four attendants each; two wards five attendants each; five wards six attendants each; one ward has seven attendants, and one ward has nine attendants.

Night Attendance and Night Supervision.—The attendance of insane patients at night—nursing the sick; attending to the wants of the well; soothing the excited; reassuring the fearful; caring for the filthy—and the supervision of night attendance, is a subject of prime importance. The prevailing practice varies in different institutions, but that much is left to be desired in this particular is almost universally admitted.

In Massachusetts, "at Westborough Hospital and the asylum wards of the State Farm every patient is seen each hour during the night. . . Danvers Hospital has some large associate dormitories which have special night attendants; and these, together with the suicidal wards and infirmaries, make ten wards at the hospital having special night nurses—the largest number of any hospital in the State. . . In some institutions many patients are not seen from the time they are locked in their rooms at night until they are awakened in the morning. A homicide at one hospital has illustrated the danger of confining two patients in one room; and there is but one hospital in the State where this is not done.

Taunton Hospital alone, under such circumstances leaves the door unlocked and wide open. The State Almshouse has in its asylum wards some rooms in which two patients are confined at night, but hopes to soon do away with this practice."

The practice in New York is as follows:—At Utica with 786 patients, 11 night attendants are employed. On the male side three wards—the suicidal, the filthy and the epileptic—each have one night attendant. On the female side four wards are attended by four nurses. All the other patients are looked after by four perambulating attendants. At Poughkeepsie 733 patients are cared for at night by 16 attendants. On the male side, 380 patients, and on the female side, a small number, are constantly in sight. At Willard 2,055 patients are given 32 night attendants. In the infirmary group 180 males have 4 nurses and 260 females have 10 nurses. In the other groups nine wards have each a night attendant. The remainder are looked after by nine perambulating night attendants who make hourly visits. At Buffalo, with 509 patients, 9 night attendants, 7 of whom are assigned to single wards and 2 making regular rounds. At Binghamton the 1,136 patients have 23 night attendants—16 on wards and 7 making rounds. At St. Lawrence 227 patients had 4 night attendants—2 in each of the two occupied cottages.

In Ohio, at Columbus there are 6 night attendants to 1,091 patients; at Cleveland 4 to 807; at Athens 6 to 813; at Longview 8 to 880; at Dayton 4 to 732; and at Toledo 10 to 1,174 patients.

In Indiana, at Logansport there is one night attendant to each of the ten detached pavilions. At Richmond there is one night attendant to each of the twelve cottages.

In Illinois, the practice, as courteously reported to me by the superintendents of the respective hospitals, is as follows:—At Anna there are five general night watches making rounds. There are no regular night attendants on wards but they are especially detailed as required. Supervisors and medical officers are subject to call, but none are regularly on duty at night. Dr. Lence, the superintendent, would like to have a regular night attendant for all patients were it not for the expense. Dr. McKenzie, of Jacksonville, says:—"Six night watches make hourly rounds. . . When we have a case of acute sickness we always detail two attendants to watch and if the case does not require special attention, the night watches give them attention every hour." Dr. Loewy, of Elgin, writes:—"We have . . . fourteen night attendants on the wards. . . On the hospital wards the night attendants act as nurses. The night attendants are assigned wards in proportion to the character of the patients in those wards. On the hospital wards one night attendant remains constantly on duty, one also on the wards containing the disturbed and untidy patients. On the better wards two and three wards are assigned to the night attendant. The head night watchman and the head night watchwoman act as supervisors on their respective sides. No medical officer is on duty at night, although I must say I am strongly in favor of it. At this hospital I believe every patient has efficient night supervision. I increased the night service by adding eight attendants about one and a half years ago. All the doors of the patients' rooms are left open at night." Dr. Gapen, of Kankakee, reports:—"We have a night service, the night nurses numbering eighteen, ten being in the male wards and eight in the female wards. We also have two outside watchmen. The supervisors have no responsibilities at night except as they are called, but both they and the medical officers are subject to call at any time. I have been steadily increasing the night service, and would like to increase it considerably more, and would do so except for the expense. . . I should like to have night service in every ward or cottage, which would mean the increase of this force from eighteen to about thirty."

The proportion of night attendants to patients in several institutions is shown in the following table:—

State.	Hospital.	Patients.	Night Attendants.		Proportion.		
Indiana	Richmond	434	12	1	night attendant to	36	patients.
"	Logansport	364	10	1	" "	36	"
New York	Rochester	350	10	1	" "	35	"
"	St. Lawrence	227	5	1	" "	45	"
"	Poughkeepsie	733	16	1	" "	46	"
"	Binghamton	1136	23	1	" "	50	"
"	Buffalo	509	9	1	" "	56	"
"	Utica	786	11	1	" "	71	"
"	Willard	2055	32	1	" "	64	"
Ohio	Toledo	1174	10	1	" "	117	"
"	Athens	813	6	1	" "	135	"
"	Dayton	732	4	1	" "	183	"
"	Columbus	1091	6	1	" "	185	"
"	Cleveland	807	4	1	" "	201	"
"	Longview	880	8	1	" "	110	"
Minnesota	Rochester	631	3	1	" "	210	"
Kansas	Osawatomie	519	2	1	" "	259	"
Illinois	Elgin	1115	14	1	" "	79	"
"	Kankakee	2090	18	1	" "	116	"
"	Jacksonville	1222	6	1	" "	204	"
"	Anna	865	5	1	" "	173	"
Totals and averages		18,533	212		" "	88	"

Classification.—In considering the subject of classification of insane patients for institutional care, it should be remembered that a pathologic, and a working classification are not one and the same thing. In a good working system of classification for hospital care and treatment, the patients are assigned to those groups and wards in which they can be best observed, treated and cared for; where they are least irritated and where they are brought in contact with congenial associates. The system must be very elastic and its various subdivisions can not be rigidly limited or their characteristics clearly defined. These facts will account for the apparent looseness with which the skeleton scheme here suggested is outlined. It is believed, however, that it fairly represents the system adopted by the superintendents of those hospitals having facilities for such classification. It provides for an institution with a capacity for 1,200 patients, and suggestions are made as to the manner in which the future capacity may be increased to 1,580 or 2,500.

SYNOPSIS OF CLASSIFICATION.

Hospital Group, Males and Females.

Female.	Male.	Ward.		Female.	Male.	Patients.
Ward 1	A	Reception	For recent admissions	25	25	50
" 2	B	Observation	" suicidal and special cases	25	25	50
" 3	C	Sick	" the sick, injured, etc	20	20	40
" 4	D	Infirmary	" " infirm and special cases	20	20	40
" 5	E	Untidy	" untidy and filthy	15	15	30
" 6	F	Violent	" violent and disturbed	15	15	30
" 6	6			120	120	240

Convalescent Group, Males and Females.

" 9	I	Convalescent	For convalescents, etc	30	30	60
" 10	J	Quiet	" quiet and refined cases	30	30	60
" 11	K	Mild	" mild cases	30	30	60
" 12	L	Mild & quiet	" " and quiet cases	30	30	60
" 4	4			120	120	240

GENERAL WARDS GROUPS.

General Wards Group, No. 1. Females.			General Wards Group, No. 2. Males.		
Ward 17	26	patients. For quiet workers	Ward Q	26	patients.
" 18	26	" " workers	" R	26	"
" 19	32	" " quiet epileptics, etc	" S	32	"
" 20	32	" " " workers, etc	" T	32	"
" 21	32	" " restless epileptics, etc	" U	32	"
" 22	32	" " patients	" V	32	"
" 23	32	" quiet dements, etc	" W	32	"
" 24	32	" restless "	" X	32	"
" 25	32	" advanced "	" Y	32	"
" 26	32	" dangerous patients, etc	" Z	32	"
" 27	26	" untidy patients, etc	" AA	26	"
" 28	26	" disturbed patients	" BB	26	"
" 12	360	"	" 12	360	"

GROUP CLASSIFICATION AND CAPACITY.

Hospital Group	120	females.	120	males.	240 patients.
Convalescent Group	120	"	120	"	240 "
General Wards Group, No. 1	360	"			360 "
General Wards Group, No. 2			360	"	360 "
	600		600		1200

Additional Capacity.—The wards in the various groups can be so arranged that additional wards may be erected, without disturbing those completed, as follows:—

	Female Wards.	Patients.	Male Wards.	Patients.	Total Patients.
Hospital Group	2	30	2	30	60
Convalescent Group	2	60	2	60	120
General Wards Group, No. 1	4	100			100
General Wards Group, No. 2			4	100	100
	8	190	8	190	380

These additions would raise the total hospital capacity to 1,580 patients. By duplicating the general

wards groups, as suggested, would increase the capacity to 2,300, and the same reduplication, with the additions, would give a capacity for 2,500 patients. In making these additions the proper hospital balance and symmetry is always preserved, and the classification will require only slight modification in detail.

Organization.—For an institution such as described, having a capacity for 1,200 patients, the following organization, for the immediate care of the insane, is proposed:—

	Hosp. G.	Conv. G.	G. W. G. No. 1.	G. W. G. No. 2.	Total.
Medical Superintendent.					1
Assistant Physician-in-charge	1	1	1	1	4
Internes.	2		1	1	4
Apothecary and Pathologist	1				1
Supervisors	2		1	1	4
Attendants.	24	12	24	24	84
Night attendants	6	2	4	4	16
Head attendants.		2			2
Totals.	36	17	31	31	116
Proportion of attendants to patients					1 to 14.2
Proportion of night attendants to patients					1 to 75

It is very important that the questions of total, group and ward capacities; of classification, and of organization, should be considered and provisionally decided upon before even preliminary studies are made for the plans for any proposed hospital. Plainly the buildings should be made to accommodate the inmates and to meet their various necessities and not *vice versa*.

Plans.—The details of plans for hospitals for the insane must vary within such wide limits to meet individual requirements that this subject can only be considered in a very general manner. However, there are some features of hospital construction which, if satisfactory results are to be obtained, must be considered as either essential or highly desirable. Some of these are briefly enumerated:—

1. Every institution erected for the care of the insane should be an improvement upon previous structures. It should retain the good features of the older ones and it should possess some new combinations or additions which will render it a decided advance in this field. No less ambitious object should be considered.

2. The ward should be considered the constructive unit, and each should be complete within itself and adapted to best meet the requirements of its inmates. It should be on one floor and should have a separate entrance.

3. The several rooms of the ward should be conveniently arranged and they should have an abundance of light and facilities for thorough ventilation.

4. The day rooms and dormitories should be entirely distinct and permit airing when not in use.

5. As far as practicable, the wards should be so arranged as to permit the supervision of several at the same time. The dormitories, especially, should be so arranged that a constant and immediate night service may be given several from a common center, thus promoting efficiency and economy.

6. Each of the groups or divisions should contain a sufficient number of wards to permit minute classification. Very large wards should be avoided.

7. Toilet and bath rooms should be separated from the living rooms by a ventilated lobby. All sewerage should be discharged directly outside the walls and there should be no basement pipes.

8. Facilities should be provided for quartering assistant physicians separately in the groups under their charge and in the immediate vicinity of their work. It is believed, and experience confirms the opinion, that by increasing the responsibilities of assistant medical officers, without diminishing the authority of the superintendent, that their interest will be enhanced and that a high grade of such officers may be obtained and retained, and that the superintendent, relieved of many petty cares and annoyances, will have more time to devote to those larger questions which should be his peculiar province.

9. The institution, as a whole and in its parts, should present a pleasing and satisfactory appearance. This may be attained in an inexpensive manner. It should not be so plain as to be ugly, neither should it have, in any sense, a palatial appearance.

10. The construction must be good, safe and substantial, and the cost moderate.

Cost.—Institutions for the insane have varied, and will continue to vary remarkably in cost, depending largely upon circumstances already mentioned. As a matter of true economy and correct principle, flimsy, cheap and shoddy construction should be avoided; on the contrary it should be safe, plain, substantial and durable. Such construction is neither cheap nor expensive, and it is certainly not extravagant. The total and per capita cost of several hospitals is here given for comparison:—

State.	Hospital.	Capacity.	Total Cost.	Per Capita Cost.
New York	Buffalo	525	$1,609,000	$3,065
"	Poughkeepsie	830	2,089,000	2,456
Pennsylvania	Danville	750	1,560,000	2,122
Massachusetts	Worcester	650	1,299,000	2,000
"	Danvers	863	1,622,000	1,878
Pennsylvania	Warren.	650	1,150,000	1,800
New York	Middletown	675	1,006,000	1,400
Pennsylvania	Harrisburg	650	921,000	1,400
Indiana	Richmond	434	547,000	1,260
"	Evansville	400	504,000	1,260
"	Logansport.	364	435,000	1,195
Massachusetts	Westborough	405	472,000	1,165
New York	Utica.	700	815,000	1,164
"	St. Lawrence	1,500	1,725,000	1,150
Indiana	Indianapolis	1,500	1,696,000	1,131
Illinois	Elgin.	1,100	1,092,000	993
Illinois	Anna.	946	1,054,000	1,110
Pennsylvania	Dixmont.	525	690,000	1,066
Massachusetts	Northampton.	470	400,000	923
Pennsylvania	Norristown	1,384	1,146,000	830
Illinois	Kankakee	2,000	1,656,000	828
"	Jacksonville.	1,200	846,000	717
Massachusetts	Taunton	698	475,000	702
Totals and averages of 23 hospitals		19,219	$24,882,000	$1,295

In this connection, I wish to enter an emphatic protest against under-estimating the cost of adequately providing for the insane in public institutions. It has been proposed to establish complete institutions at a cost not to exceed $200 per capita. Proper accommodations for these classes can not be furnished for any such sum, and calculations and expectations based upon such estimates are misleading and can only end in disappointment.

Insanity is undoubtedly the greatest calamity which can befall a human being. From the very nature of his condition he is usually helpless and powerless to do good and is a constant menace to the safety of himself and to others. From every point of view, therefore, he deserves, not only our sympathy, but our intelligent benevolence as well.

34 Washington Street.

ALCOHOL AND ITS EFFECTS.

BY W. P. HOWLE, M.D.

ORAN, MO.

Alcohol pure in full strength is rarely used as an internal remedy. In the form of whisky, brandy or wine it is often used. In minute doses it *stimulates;* in large doses it intoxicates; in larger doses it may kill. Therefore its effects like the effects of anything else depend upon the quantity given, the conditions under which it is taken, etc. An ounce of alcohol in a pint of water or syrup makes a stimulant about the same strength as ordinary wine; a tablespoonful of this three times a day before meals improves the appetite and leaves no bad after effects. This quantity of alcohol would last a patient nine or ten days, and within a year thirty-six ounces or a little over three pints of alcohol would be used. This quantity would not harm the average adult.

Alcohol given in teaspoonful doses every hour or

two, soon makes a patient drunk, poisons him for the time being, just as large doses of opium or chloral would. Stop the dosing and nature restores by throwing off the alcohol. Alcohol is not deposited in the tissues as mercury is said to be. Confine the worst toper in the land for ten days and no trace of alcohol can be found in his tissues. The constant use of large doses of alcohol destroys the user. It kills one man by its effects on his stomach; another by its effects on the brain; in others the liver, kidneys or heart may be the organ to give way first. In other cases it seems to spend its force on the nervous system. It seems to act as a traumatic, wounding here and there as it passes through the system, setting up gastritis, pericarditis, meningitis, etc. Why it selects a certain organ in preference to another, I can not explain, but that it does so no one will deny. Gastritis caused by alcohol is as amenable to treatment as if caused by another agent; so with any ailment that alcohol may produce. Remove the cause and nature soon puts things in order. Looked upon as a traumatic, the effects of alcohol are more easily understood.

Some of our learned men, group the many deleterious effects of alcohol all under one head and call it alcoholism. This is a handy way of doing business, but very far from the truth. Alcohol may be doing great injury to a man's kidneys, while some other agent is ruining his stomach or brain. Removing the alcohol might relieve the kidney trouble, but would not stop the stomach or brain trouble. So in examining a drunkard, look for other causes of disease beside alcohol in making your diagnosis and treatment. A drunken man often lies out on the cold ground for hours and gets *chilled*. The effects of the chill may be quite different from those of an ordinary *jag*, hence a different diagnosis and treatment will be in order.

The victim of alcohol is exposed to many dangers outside of the effects of alcohol. He is careless, wounds himself, gets wounded, mixes with all classes of people and is therefore more exposed than the sober man. All these things must be considered in studying the effects of alcohol. In examining the brain of a drunkard can you say this or that change of structure was the result of alcohol, and ignore the fact that this man was a syphilitic, had had many hard blows on his head, had been in prison, had been beaten into insensibility a number of times, had been thrown off of horses, off of wagons, off of trains, down stairs, and many other things incident to drunkenness. All these things considered, are you positive that alcohol caused this or that lesion found at your *post-mortem?* Let us give the devil his due. It is natural when we wish to show up anything as bad, that we paint it in its worst colors. Alcohol is bad enough in its effects, but certainly is often accused of crimes to which it was only accessory.

I am on record as to how I feel about the user of alcohol, as to whether he is responsible for his acts, and will not discuss that phase of the question now. I see others engaged in this who are more competent. Alcohol has come to stay as a remedy; it is capable of much good or harm, according as it is rightly or wrongly used.

Blank Applications for membership in the ASSOCIATION at the JOURNAL office.

SOCIETY PROCEEDINGS.

Proceedings of the First Meeting of the American Academy of Railway Surgeons.

Held at the Grand Pacific Hotel, Chicago, Ill., Nov. 9 and 10, 1894.

(Continued from page 989, Vol. XXIII.)

On motion of DR. R. HARVEY REED, the Academy proceeded to the election or rejection of *those present*, to fellowship in the Academy.

On motion of DR. L. E. LEMEN, *three negative votes* were declared sufficient to debar an applicant for fellowship in the Academy.

The chair appointed Dr. L. E. Lemen, Denver, Colo.; Dr. F. H. Peck, Clinton, N. Y., tellers The count of the ballots showed all present elected to charter fellowship with the exception of two.

[Owing to their mention in the preceding report, we omit the names of those who were *present* and who were elected to fellowship.—ED.]

Adjourned to meet at 2 P.M.

SECOND SESSION, FRIDAY, NOVEMBER 9, 2 P.M.

On motion of DR. F. H. PECK, Clinton, N. Y., the Academy proceeded to ballot on the applications of those gentlemen who were *not present*.

The tellers reported the following railway surgeons who had made formal written application, as having been elected to fellowship in the Academy:

Dr. David C. Ainey, Ass't Surgeon, D. L. & W. Railway, New Milford, Pa.

Dr. Wm. T. Bishop, Medical Examiner, Pennsylvania Railway, Harrisburg, Pa.

Dr. A. B. Brumbaugh, Surgeon, Pennsylvania Railway, Huntingdon, Pa.

Dr. W. H. Buechner, Surgeon, Erie Railway, Cleveland, Ohio.

Dr. J. F. Bancroft, Chief Surgeon, U. P. D. & G. Railway, Denver, Colo.

Dr. W. M. Bullard, Ass't Surgeon, Montana Central Railway, Helena, Mont.

Dr. G. P. Conn, Chief Surgeon, C. & M. Railway, Concord, N. H.

Dr. Geo. Chaffee, Surgeon, L. I. Railway, Brooklyn, N. Y.

Dr. M. Cavana, Surgeon, N.Y. P. & O. Railway, Oneida, N.Y.

Dr. Henry W. Coe, Surgeon, East Side Railway, Portland, Ore.

Dr. R. H. Cowan, Surgeon, N. & W. Railway, Radford, Va.

Dr. Leroy Dibble, Surgeon, C. R. I. & P. Railway, Kansas City, Mo.

Dr. Wm. T. Dalley, Ass't Surgeon, U. P. Railway, Salt Lake City, Utah.

Dr. W. L. Estes, Chief Surgeon, L.V. Railway, S. Bethlehem, Pa.

Dr. F. B. Eaton, Oculist, Oregon Railway and Navigation Co., Portland, Ore.

Dr. Spencer M. Free, Surgeon, B. R. & P. Railway, DuBois, Pa.

Dr. J. H. Ford, Chief Surgeon, Big Four Railway, Wabash, Ind.

Dr. Jno. F. Fulton, Surgeon, N. P. Railway, St. Paul, Minn.

Dr. L. C. Ford, Ass't Surgeon, U. P. Railway, Lima, Mont.

Dr. E. Griswold, Surgeon, Erie Railway, Sharon, Pa.

Dr. J. D. Griffith, Consulting Surgeon, K. C. F. S. & M. Railway, Kansas City, Mo.

Dr. R. P. R. Gordon, Surgeon, G. F. & C. Railway, Great Falls, Mont.

Dr. Jesse Hawes, Division Surgeon, U. P. D. & G. Railway, Greeley, Colo.

Dr. G.W. Hogeboom, Chief Surgeon, A. T. & S. F. Railway, Topeka, Kansas.

Dr. R. L. Harris, Chief Surgeon, S. & St. A. Railway, Oakland, Fla.

Dr. Lester Keller, Surgeon, C. & O. Railway, Ironton, Ohio.

Dr. Samuel Kennedy, Surgeon, Big Four Railway, Shelbyville, Ind.

Dr. Sherman Leech, Surgeon, B. & O. Railway, Mt. Sterling, Ohio.

Dr. N. Y. Leet, Chief Surgeon, D. L. &. W. Railway, Scranton, Pa.

Dr. John McLean, Chief Surgeon, P. P. C. Co., Pullman, Ill.

*Dr. E. A. McGannon, Surgeon, G. T. Railway, Brockville, Ont., Can.

Dr. S. L. McCurdy, Surgeon, P. C. C. & St. L. Railway. Pittsburg, Pa.

Dr. Truman W. Miller, Chief Surgeon, C. & G. T. Railway, Chicago, Ill.

Dr. Henry McHatton, Surgeon, Southern Railway Co., Macon, Ga.

Dr. W. D. Middleton, Chief Surgeon, C. R. I. & P. Railway, Davenport, Iowa.

Dr. K. A. J. Mackinzie, Chief Surgeon, O. R. & N. Co., Portland, Ore.

Dr. Wm. Mackie, Surgeon, C. M. & St. P. Railway, Milwaukee, Wis.

Dr. M. V. B. Newcomer, Surgeon, L. E. & W. Railway, Tipton, Ind.

Dr. R. Ortega, Chief Surgeon, M. I. R. R. C. P., Diaz, Mex.

Dr. J. F. Prichard, District Surgeon, C. & N. W. Railway, Manitowoc, Wis.

Dr. C. B. Powell, Surgeon, C. B. & Q. Railway, Albia, Iowa.

Dr. Geo. Ross, Chief Surgeon, Southern Railway Co., Richmond, Va.

Dr. J. F. Reger, Surgeon, B. & O. Railway, Littleton, W. Va.

Dr. F. A. Stillings, Chief Surgeon, C. & M. Railway, Concord, N. H.

Dr. C. M. Scott, Ass't Surgeon, U. P. Railway, Payette, Idaho.

Dr. S. S. Shield, Surgeon, N. Y. L. E. & W. Railway, Carbondale, Pa.

Dr. F. J. Schug, Surgeon, U. P. Railway, Tacoma, Wash.

Dr. A. N. Talley, Surgeon, C. N. & L. Railway, Columbia, S.C.

Dr. Wm. Thompson, Oculist, Pennsylvania Railway, Philadelphia, Pa.

Dr. B. H. Van Kirk, Surgeon, B. & O. Railway, West Newton, Pa.

Dr. Geo. M. Waters, Surgeon, Big Four Railway, Columbus, Ohio.

Dr. C. A. Wheaton, Chief Surgeon, St. P. & D. Railway, St. Paul, Minn.

Dr. G. A. Wall, Eye and Ear Surgeon, A. T. & S. F. Railway, Topeka, Kan.

Dr. W. H. Elliott, Chief Surgeon, Central Railway of Georgia, Savannah, Ga.

On motion of DR. F. H. CALDWELL, the vote on Dr. W. W. Barnett was re-considered, and together with the application of Dr. Scott Helm, of Arizona, was referred to the Executive Board.

DR. G. S. WORLEY, Chief Surgeon, J. St. A. & I. R. Railway, St. Augustine, Fla., read the following interesting paper on

TRAUMATIC ANEURYSM.

Under the name traumatic aneurysm, several distinct affections are usually classified. The so-called, diffuse traumatic aneurysm is, strictly speaking, not an aneurysm at all, being merely an accumulation of arterial blood diffused through the tissues of a part, and differing only from a case of ordinary wounded artery, by the absence of communication with the external air. Hence the term, traumatic diffuse aneurysm, applied to a wounded or ruptured vessel filling the whole neighborhood with almost limitless (not encapsulated blood) is evidently a misnomer, since some sort of sac is inherent to the idea of aneurysm and what has been so incorrectly named as above, is a wounded or ruptured artery with interstitial or subfascial hemorrhage. Since, however, the treatment of this affection is so nearly identical with that of other forms of traumatic aneurysm, it seems consistent to include it in any practical treatise upon this class of injuries.

The diagnosis of this condition can usually be made with tolerable facility. It is a subcutaneous, soft and fluctuating tumor, often of considerable size, containing extravasated blood, and appearing immediately, or very soon after the wounding of an artery. At first the skin covering is not affected, but in a few days it often becomes discolored with ecchymosis, caused by the infiltration of blood. If the opening in the artery be large and free, the tumor will usually exhibit pulsation, synchronous with the heart-beat accompanied by a thrilling, purring or jarring sensation, and frequently by a loud bruit. If the artery injured be a very small one, however, or if the opening in the arterial tunics be oblique or of a limited size, or obstructed, there will be no distinct pulsation or bruit. In such cases the tumor will be indolent and semi-fluctuating or will perhaps, exhibit an impulse which is communicated to it by the subjacent artery. Many cases are reported of diffused traumatic aneurysm in which there was neither pulsation, nor thrill, nor bruit.

The size of an aneurysm of this variety will naturally be determined in a great measure by its locality. For instance, in localities where the subcutaneous connective tissue is abundant and very loose, it may rapidly attain a considerable size, while in other localities, such as the palm of the hand or the bend of the elbow, in consequence of the strength and resistance of the fascia its growth is correspondingly restricted. When the blood is suddenly effused in great quantity, in a traumatic aneurysm of the axillary or femoral region, all the constitutional signs of hemorrhage—pallor, cold sweating, pulselessness and syncope—may arise; and sometimes, in such cases, death from anemic exhaustion, as well as from syncope, may ensue. Diffuse traumatic aneurysms require the same treatment as ordinary wounded arteries; Erichson wisely observes: "The treatment of these cases must be conducted on precisely the same plan as that of an injured artery communicating with an external wound; the only difference being that, in the case of the diffused traumatic aneurysm, the aperture in the artery opens into an extravasation of blood, instead of upon the surface. We must especially be upon our guard, not to be led away by the term 'aneurysm,' that has been applied to these cases, and not to treat such a condition, resulting from wound by the means that we employ with success in the management of that disease."

The safety of the patient, as a rule, depends on exposing the injured artery, and ligaturing it above and below the lesions. In deeply seated arteries this is not by any means an easy operation. In some cases, compression, with absolute quietude of the injured part, should be tried before resorting to ligation. When arteries are ruptured by fragments of bone in simple fractures of the leg or thigh, compression, digital or instrumental, continuous or intermittent, should be applied to the main trunk of the femoral artery. This together with the immobility of the injured limb and the moderate degree of pressure on the tumefaction which are furnished by the dressings of the fracture, has often proved much more successful than any other plan of treatment. So, also, in cases where the axillary artery is ruptured, for instance, in the act of reducing old dislocations of the shoulder joint, and a diffuse aneurysm forms in consequence thereof, compression should be applied to the subclavian artery over the first rib by means of a door key or other suitable instrument, while the arm is immovably fastened to the chest by a roller.

Should compression fail in either class of cases, deligation of the main artery will generally succeed; provided the arm be kept immovably fixed to the chest, or the leg be held motionless by the fracture dressings in the other. But, in cases where immobility of the injured part can not be secured, the wounded artery should be laid bare and ligated above and below the injury, with as little delay as possible.

When an aneurysm upon which this, which is called the "old operation" is about to be performed is so situated that the circulation in the main artery can not be controlled by digital compression, nor by tourniquet, nor by Esmarch's

*Since deceased.

elastic ligature—as, for example, at the root of the neck—the operation should be begun by making a puncture just large enough to admit one or two fingers of the left hand, which should be quickly thrust into the swelling in such a manner as to plug up the orifice in the integuments; the finger or fingers should then search the bottom of the cavity to find the aperture in the wounded artery, covering the aperture with the finger to prevent any outflow of blood from it, while the tumor is freely laid open, the coagula removed, and the artery ligated on each side of the lesion, as was done by Dr. R. F. Weir, U. S. Army, during the late civil war.

There is another variety of traumatic aneurysm, the pathology of which is the same as that just described, but in which the extravasation is less extensive, and in which an adventitious sac has been formed by the agglutination of the surrounding areolar tissue. Most or all of the large aneurysms, however, could be included in this class, on account of the substitution of condensed connective tissue in the wall for the distended coat of the artery. The presence of a lining coat similar to the intima of the artery is not conclusive proof of the persistence of the latter; it may be entirely of a new formation. The common cause is a penetrating or punctured wound. It is said to be caused also, but much less frequently, by overstretching of the artery in the neighborhood of a joint and fracture. The continuity of the artery is usually not entirely destroyed, and while some of its blood escapes into the adjoining tissues, the remainder continues within it and is distributed through its branches. The effused blood is in part absorbed, and in part coagulates; and after a time a distinct sac is formed about it by condensation of the tissues, and it then differs in no essential way from the common encysted form of aneurysm. Its symptoms and its subsequent course are then the same, but during the stage of formation of the sac the condition presents symptoms of danger peculiar to itself. During the formative stage of the sac, also, the injury is peculiarly amenable to treatment by direct pressure, at the seat of injury; and often after the sac has formed, a cure may be effected by the same means. This is the one important practical point of difference between traumatic and spontaneous aneurysms.

There is another form of circumscribed traumatic aneurysm, which is called "hernial" and which results from the protrusion of the inner coats of the vessel through a wound or laceration of the outer tunics. This variety must be extremely rare; its existence, indeed, is doubted by many writers. The true circumscribed traumatic aneurysm results from a punctured wound of an artery—generally a large one—which has healed, the cicatrix afterward yielding, and a true sac being thus formed from the external coat of the vessel and its sheath. The treatment consists in compression, or in ligation of the artery at as short a distance as possible above the sac. Should, however, (in any of these forms of circumscribed traumatic aneurysm) the sac burst, allowing the aneurysm to become diffused, or should suppuration or gangrene appear imminent, the proper course would be to lay open the part freely and apply ligatures above and below, as in the case of the so-called diffused aneurysm already described.

Sometimes an artery and its contiguous vein are simultaneously wounded, and an abnormal communication between them established. This condition may assume two distinct forms, known respectively as aneurysmal varix, and varicose aneurysm. Aneurysmal varix consists in a direct communication between an artery and a vein. The arterial blood which is projected into the vein at each pulse-beat, dilates it more or less extensively, and causes its walls to thicken; the symptoms are the presence of a circumscribed irregular tumefaction, usually small and bluish in color formed by a dilated vein, having a peculiar tremulous motion and emitting a peculiar thrilling, hissing or buzzing sound, which arises from the passage of blood through a small aperture in the artery, into the dilated vein.

The tumor is usually accompanied by a varicose condition of the neighboring veins. It is soft and disappears upon direct pressure. It subsides when the limb is elevated so as to favor the return of venous blood toward the heart, and in the same way its pulsation is rendered less distinct. But when the limb hangs down, or pressure is applied to the vein on the cardiac side of the tumor, it enlarges and the pulsations are increased.

Compressing the vein on the distal side of the tumor does not lessen either its size or its pulsation. When, however, the artery is compressed on the cardiac side of the tumor, the pulsation immediately ceases, and it instantly returns on raising the compression.

Varicose aneurysm differs from an aneurysmal varix, in that the arterio-venous communication is indirect, through an interposed aneurysmal sac. Its symptoms are a combination of those of aneurysmal varix and of ordinary traumatic aneurysm; the tumor, as a rule, gradually enlarges and becomes more solid by the deposition of fibrin; there is a distinct impulse added to the jarring sensation of the aneurysmal varix; and there is an aneurysmal whirr superadded to the rasping sound heard in the former affection. The proper treatment of the affection, if the sac is enlarging, consists in laying open the tumor and tying the artery above and below; in doing this, however, it must be borne in mind that the first incision (which opens the dilated vein) merely exposes the external orifice of the sac, and that this must be laid open by a second incision, when the aperture of the artery will be found more deeply seated.

The question of tying both artery and vein with double ligatures, is one which should be decided by the surgeon according to the exigency of the case. Professor Ashurst, from whom I have borrowed these illustrations respecting the various forms of traumatic aneurysm and their appropriate treatment, has hardly done more than gather up into a whole, the generalizations of his leading scientific and practical contemporaries.

In the treatment of traumatic aneurysm, particularly the varieties demanding immediate operative interference, we have a superb illustration of the slang maxim that "nothing succeeds like success."

The indications for treatment and the methods applicable for each individual case must be determined by the surgeon in attendance having in view the recognized and established laws of surgery, possessing a thorough knowledge of the anatomy of the parts to be operated upon, their correlative nervous and vascular supply and the general surroundings or the patient; he should be able by proceeding cautiously, step by step, to adopt the methods most applicable to the case.

The judicious application of pressure to the site of the injury or to the main artery, which is often essential to the successful treatment of this class of injuries, will not infrequently tax the ingenuity of the surgeon to its utmost. There can be no specially devised paraphernalia such as tourniquets, compressors, clamps or bandages which will meet the requirements in all, or in any considerable number of cases on account of the difficulty in adjusting them properly, so as to control the circulation in the wounded vessel, and at the same time protect the collateral circulation and other important structures from injurious pressure.

The more we allow ourselves to depend upon what we consider a complete armamentarium of ingenious, complicated and, as a rule, costly appliances, the more certain are we to fail in the accomplishment of our designs. It is much easier to cut a curved line with a straight knife than a straight line with a curved knife. If the surgeon understands the exact condition with which he has to deal, his skill and tact should be equal to the emergency, and his success will often be a matter of surprise to himself and the profession over the wonderful and unexpected results accomplished with such clumsy and unscientific appliances. I do not mean by this to detract from the value of useful scientific instruments or appliances, or to disparage their use, for many of them are as indispensable to the surgeon, as the saw or square is to the carpenter, but the idea that a surgeon is incompetent to treat a complicated injury of this class, or any other class for that matter, simply because he is not in possession of some ingenious instrument or appliance devised by Professor so-and-so expressly for the purpose, is one of the gigantic errors and stumbling stones in the path of every would be successful surgeon.

The place for the armamentarium of the surgeon is in his head and not in his office or instrument case; more especially does this apply to the railway surgeon who, as a rule, has nothing but emergencies to deal with and where it is always the unexpected that happens.

The difficulty encountered by the surgeon in cutting down upon, and ligating a wounded artery in a case of diffuse traumatic aneurysm, where its continuity has been entirely destroyed, and where it is necessary to secure both ends of the vessel, or in cases of encysted aneurysm where it is necessary to ligate the artery both on the proximal and distal sides of the sac, and especially in cases of varicose aneurysm, where it may be necessary to tie both the artery and its contiguous or communicating vein separately, both above and below the tumor, are often very great, and must be overcome by the cool deliberate horse sense of the surgeon or his patient will surely suffer the consequences, likewise his own reputation.

I deem it unnecessary to add that in all cases where wounds are made for the purpose of ligating vessels, the strictest antiseptic precautions that are possible under the circumstances should be observed. The antiseptic catgut ligature or a catgut ligature supposed to be antiseptic, is generally used for tying the vessels, but I prefer a specially prepared silk ligature for the purpose, prepared in the following manner: I take a small hank of No. 1 or 2 braided silk, and immerse it for several hours in a solution containing two parts of pure carbolic acid, two parts salicylic acid and ten parts of white wax, keeping the solution in a melted state by heat. The silk is kept in this solution for five or six hours, when it becomes so thoroughly saturated with the wax that it will remain in the tissues for several days without absorbing moisture or causing irritation. Moreover, it is, I suppose, impervious to the various pathogenic germs, which are credited with being the cause of so much trouble in these cases.

It has at least the following advantages: It is easily applied and when tied with the ordinary reef knot it will not slip. It can remain for several days in the tissues without irritating them to any appreciable extent, and the artery can be more securely occluded by it than with any other substance with which I am acquainted, especially the deep arteries which are difficult to reach.

The wound of operation should be dressed antiseptically, and redressed as often as necessary, and allowed to heal by granulation; after the ligatures have become detached and the wound is in a healthy condition the granulating surfaces should be approximated by adhesive strips or other suitable means and encouraged to heal by direct union.

The complications usually encountered in the treatment of this class of injuries are those naturally incident to obstruction of the circulation. The all important indication in cases where the main artery and vein of a limb have been occluded by ligature or other cause is to protect and preserve the collateral circulation.

The simultaneous occlusion of the main artery and vein of a limb should not cause mortification, unless the collateral channels are also obstructed. These channels may be dangerously obstructed by pressure exerted upon them from careless bandaging, or by the position in which a limb may be placed, as well as by the compression which arises from edematous, inflammatory, and hemorrhagic swelling. The aponeurosis or fascia cause strangulation by acting as unyielding bands, and should be freely incised, when necessary, in order to relieve extreme tension and the consequent pressure occasioned thereby.

I will not tax your patience further by suggestions upon the operative technique of any of the varieties of traumatic aneurysm. The diversity of method among surgeons is as great almost as the number of surgeons in existence. The idea is to determine what to do, and the general rules relating to how it should be done, with special reference to the complications liable to ensue, and then do it in your own way.

I know it is often beneficial to compare methods and endeavor to eliminate what is unnecessary in technique, and reduce everything connected with operative work to the greatest possible simplicity, but the confusion which would inevitably result from any such comparison in this instance would be greater than the benefits achieved.

In the absence of Dr. N. Y. Leet, Chief Surgeon, D. L. & W. Railway, Scranton, Pa., who was to have opened the discussion, the paper was discussed as follows by the different Fellows of the Academy:

DISCUSSION.

DR. J. HOWARD WILLIAMS, of Macon, Ga.—My experience with traumatic aneurysm is rather limited. Most of my cases have been from gunshot wounds. I have never seen a case in railway injury, nor have I ever seen a traumatic aneurysm in the early stages; it has always been a circumscribed traumatic aneurysm. Most of them, as I say, were from gunshot wounds, but some of them in railroad work, however. The only thing I have ever been able to accomplish in the treatment of them was the ligation of the arteries supplying the aneurysm. Compression or any other method of treatment has not succeeded. I have tried introducing wire into the sac and the use of electricity, but the only thing that has ever succeeded with me has been ligating the arteries above the sac.

DR. C. D. EVANS, of Columbus, Neb.—While the paper is certainly a masterpiece in regard to traumatic aneurysm, there is one thing that has not been mentioned and that is the bloodless method of treating traumatic aneurysm. I had never thought of it until about three months ago, when I operated on a patient for traumatic aneurysm, and the absence of that point in the paper brings it very forcibly to my mind. A doctor from a neighboring town brought me a case of traumatic aneurysm. It was a very plain case and very easily diagnosed. The man's leg in the upper two-thirds from the knee down was very badly ecchymosed, and a large fluctuating tumor was noticeable about midway or a little below midway on the outer side of the leg. To make a long story short, I applied an elastic bandage above the knee, and controlled hemorrhage in that way, making the lower limb bloodless, which to a great many may not seem good surgery. I ligated the posterior tibial artery, and that was the end of it. The wound healed by first intention. I turned out all the clots of blood almost the size of a goose egg. I might add also in connection with this case of traumatic aneurysm, that the man was a brickmaker by trade and was wheeling heavy loads of brick. The history he gave of the injury was this: The rain was going to destroy the brick. Several of them were wheeling heavy loads of brick together, and another man ran against his leg with the wheel of his wheelbarrow, and having a very heavy load at the time, his muscles were very tense, and the wheel coming in contact with his leg caused the injury.

DR. JOHN E. OWENS, Chicago—I have not seen an aneurysm for a long time and I do considerable hospital practice. I can not account for it occurring in the practice of other men, and yet there is nothing special in my treatment that would prevent aneurysm. The last case of traumatic aneurysm that I have in mind was a miniature one resulting from fracture of the tibia, and there was a small pulsating tumor about the size of a filbert. I cut down upon the part and could not find anything to compress in the bone. Compression did not seem to have any effect, and the pulse was very easily observed. I cut down upon it expecting to find some vessel running into the bone around which I could place a ligature and cure it. I fished around for a long time, but could not find anything, and becoming somewhat discouraged I took a chisel and scooped everything out of the bone and cured it. I think we should use the elastic bandage in cases of traumatic aneurysm with some degree of circumspection. It is an obstructive disease of the circulation. I refer to aneurysm in which the circulation is more or less disturbed and mortification supervenes very frequently, not only after traumatic aneurysm, before any operation has been done, but even after some operation like ligation or pressure. If we look at the liability of a case that comes to us in our line of work, we can readily see that the elastic bandage is an element in the treatment of traumatic aneurysm which may give us some trouble. The elastic bandage may be stretched considerably, and I should feel a little uncomfortable if I used it for fear of causing mortification. I would be disposed, I think, speaking in a general way, without going into details, to adopt pressure in most cases, and if I did not get very satisfactory results, I should at once cut down upon the vessel where it is possible to do so, and tie above and below. I would feel better when I got home after having done this.

DR. REED, of Ohio—I am very glad to see that we have with us an eminent surgeon who has just arrived. I know that he is posted on aneurysm, and I would be glad to hear from him. I refer to Dr. Bevan, of Chicago.

DR. ARTHUR D. BEVAN, of Chicago—I, unfortunately, did not hear the paper, but simply had an opportunity of hearing the latter part of Dr. Owen's discussion. The paper, I

believe, dealt with traumatic aneurysm. I have had a very interesting case of this kind within the last few weeks which may be of interest to report. A boy of 20, received a stab wound at the apex of Scarpa's triangle. He was taken to the Cook County Hospital, and hemorrhage at the time was rather profuse. A dressing was applied which controlled the hemorrhage. The wound almost healed, and at the end of two weeks he was discharged from the hospital with a small suppurating sinus. At the end of three weeks, after the receipt of the wound, he was brought to my service at the Presbyterian Hospital with a swelling about the size of a small chicken egg over the seat of the original lesion. The signs of traumatic aneurysm were very marked. I put him under chloroform, and cut down upon the line of the mass, and I found this interesting condition: There was a stab wound anteriorly through both sides of the artery just at the apex of Scarpa's triangle. The wound of the anterior surface of the artery was about three-quarters of an inch in length, and the wound on the posterior surface, about a quarter of an inch in length. I opened up the entire field of the lesion, the aneurysmal sac which surrounded the artery and vein and deep fascia of the thigh. The blood was pumping through the artery, and it is really remarkable that the patient did not have more hemorrhage because the sac seemed to be in direct communication with the fistula, although filled up with fibrin. The saphenous nerve was to the outer side of the vessel and the femoral vein to the posterior side. The operation was that of ligation. The patient made a good recovery without any interference with the circulation of the limb. Although I did not hear the paper, I am rather inclined to think that the idea of treating traumatic aneurysm by pressure was advocated. Personally, I do not think of a case in which I would feel warranted in treating traumatic aneurysm by pressure unless at some inoperable point of the anatomy.

Dr. W. H. Buechner, of Youngstown, Ohio—I think traumatic aneurysms in consequence of railway injuries are extremely rare. I have had a rather extensive railroad practice of twenty-seven years and have never met with one. As far as the treatment is concerned, I think the only rational treatment is to shut the vessel off. I have tried compression, electricity, etc., and I have never found that either of them amounted to much. I have always succeeded by tying the vessels. The largest traumatic aneurysm I ever saw was at Professor Volkman's surgical clinic in 1886. It was caused by a stab wound in the brachial artery. He tied the vessel on both sides, and I saw the man probably six weeks after with a perfectly useful arm, a good pulse and wrist.

Dr. Evans—I saw a case of traumatic aneurysm about twenty odd years ago. The young man was 28 years of age, of general good health, and fairly well nourished. He was swinging on a horizontal bar, and within a few hours an aneurysm of the upper third of the brachial artery presented itself. The case is hardly in line with the Doctor's paper, yet it was due to traumatic causes. The axillary artery was ligated at its upper third, and eight days afterwards secondary hemorrhage came on. The patient made a very nice recovery. I think the success of this case was due to an idea I got from an old physician who saw the case with me, and that was compression by a bandage over the first rib, keeping it there until the wound had entirely healed. I think largely the success of the secondary operation of ligation of the axillary artery in the upper third was due to that compression. It was not stiff enough to entirely close up the wound.

Another case: A brakeman who was thrown from a freight car received an injury about the fascia lata. There was evidently considerable effusion of blood underneath it, because the swelling of the part was as large as an ordinary orange. I laid the parts thoroughly open, expecting to ligate some of the vessels, but in using hot water after the aneurysm was arrested, the wound closed up, and the patient made a good recovery.

In another case in which there was a stab wound of the subscapular artery, I laid the parts open extensively and ligated. Compression did no good. As to the use of the elastic bandage, I must say I feel some doubt as to the propriety of using it, especially when the blood supply is already interfered with. Much injury can come not only from what blood vessels remain intact, but also to the nerve tissue itself, and quite serious results might follow.

Dr. Scott, of Temple, Texas—One or two thoughts come to me since this subject has been opened for discussion that I think might well be brought up. In regard to the treatment, we must say that it necessarily varies according to the location of the aneurysm. Compression may no doubt be very good in some instances, and in others it may be harmful. I hardly think of using compression in some cases, particularly elastic compression, such as mentioned. But there are certain localities where I am satisfied compression is very good, one in particular which the Doctor has mentioned in injury to the subscapular artery. It is hard for one to understand what is to be feared in opening an aneurysm in that location unless he has had previous experience. But to one who has opened an aneurysm, perhaps as large as the head in that locality and had the pleasure of hunting around and trying to find the bleeding vessel and some features connected with it, it naturally brings about dread. I would say that there are some cases, no doubt, that possibly can be controlled by compression, but I would not think of using it until after the blood clot had been removed. I have seen two cases of traumatic aneurysm in or about that locality. In one that I was called to see, torsion was used instead of ligation. In the other case, which I had a few months ago in Temple, I was uncertain as to whether to search for the vessel or not, and I concluded to simply make an opening, remove the blood clot, and if the bleeding were great, I would go for it. In some cases it is safer to depend upon compression, provided compression will do. I had some evidence of the location of the injury on account of the contusion of the skin. I was satisfied it would be much easier for the patient and less embarrassing for myself to use compression. This I did, and controlled the hemorrhage very nicely. But there are one or two points, I think, that should receive some attention. It seems to me that the uniform opinion expressed here is that when a vessel is exposed it should be tied both above and below the seat of injury and the wound closed up, and the aneurysmal tumor divided between the points of ligature. It may seem a little previous in suggesting under these circumstances, torsion. I would favor it for several reasons, and among them the principal one is this, that when we have large aneurysmal tumors there is abundant reason for absorption, and if any infection whatever takes place during the operation we are very liable to have serious trouble resulting. The doctor who read the paper on this subject suggested, I believe, that this particular line of injuries came under the head of emergency work, and if it is emergency work, then we are not usually properly prepared with our ligatures, that is, the average railway surgeon is not always prepared for *such* emergency work. He cannot always depend upon the ligatures he has, and under such circumstances it is much safer to resort to torsion. I desire to say that recently I conducted some experiments, the results of which I read before the Texas State Medical Association not long since and expected to have had them published in *The Railway Surgeon* before this, but the paper has not yet appeared. My experiments were conducted along the

line of torsion. I will mention one of them. The carotid artery of a dog was ligated, exposed, and a tube attached to it. The blood arose (in the dog's carotid artery) to about six feet in this case, and in another about five and one half feet. Then the tube was immediately removed, and about three inches of the artery were excised, the proximal end of the artery was twisted, then let go, and it failed to bleed. The tubing was then emptied and the blood vessel left attached to the tubing by a small canula. The tubing was filled with water, attached, a portion of the artery three inches long was twisted, and water allowed to flow into the vessel to see if it would cause the blood vessel to recoil or leak. The tubing was then doubled in length and filled with water rising to a height of eleven feet. This is not absolutely correct but approximately so. There was double the normal arterial pressure, the water was allowed to flow into this excised and twisted artery, and it did not cause it to open or recoil, demonstrating that a twisted blood vessel, when properly done, would resist double the normal blood pressure. That experiment was carried out in several ways. Many other experiments were done, and in connection with them, the abdominal aorta was exposed and excised, caught between two forceps and each end excised, when it remained pulsating for quite awhile after the dog was dead. I mention this to show that torsion will resist double the normal blood pressure, and we can depend upon it in these cases of aneurysmal tumors more certainly than we can ligation with silk, silkworm gut, chromicized catgut, or anything else. I have so far never heard of secondary hemorrhage from it, if it has been properly applied. It is not rare to find secondary hemorrhages from various causes where ligatures are applied.

DR. HARNDON, of Waverly, New York—I have very little to say on this subject. I have seen very little of traumatic aneurysm in railway practice. I remember a serious case in hospital practice twenty-five years ago, where it wound up with the death of the patient. The case did not occur in my practice. It may appear somewhat sensational to you, but I believe the day will come when aneurysm will be successfully treated. When a blood vessel has been severed or nearly so, so that compression may not destroy the circulation, then I believe as a preventive of amputation that the aneurysm may be removed and the blood vessel restored by dissecting it out, perhaps stretching it somewhat which you know it will bear, and restoring its continuity by placing some tube within its walls carrying on circulation. All that remains is to make that experiment. It has been tried and has been successful, temporarily restoring the circulation in the limb by placing a tube there which would absorb without any harm being done. I believe in this direction lies a successful remedy for traumatic aneurysm.

DR. COLE, of Helena, Montana—The author of the paper drew a graphic picture between varicose aneurysms and aneurysmal varix. I simply wish to dwell upon one or two points. The author spoke of the uniform constant thickening of the walls of the veins in those cases. Where that is the rule, I think he will agree with me it is not invariably so, and sometimes they burst through. In aneurysmal varix the wall of the veins is thin and leads to disastrous results. About three weeks ago a case was brought to my hospital in which there had been a dislocation of the joint. My assistant reduced it and overlooked a lateral dislocation of the radius. The case occurred about a month prior to my seeing it, and in attempting to replace the dislocation I succeeded in injuring the artery and produced a small traumatic aneurysm which yielded satisfactorily to pressure. I do not believe any more in the pressure treatment as a rule, than those who have expressed themselves here to-day, yet I am satisfied in emergency work we cannot be guided by any ironclad rules. We cannot lay down a rule that will be invariably followed with success. As a rule, the safer plan is ligation of the artery, not necessarily ligation of it on each side of the injury. I think that operation and the excision of the vessel between the ligatures should be done with reference to the size of the vessel and the location of the injury. I think the writer perhaps was a little misquoted by some one in saying that he invariably recommended ligation of both sides. I do not think that statement was made in the paper, nor do I suppose any one would advocate that as an invariable rule.

DR. REED, of Columbus, Ohio—I have been highly entertained by the discussion of this excellent paper. It is a subject which, although not of unusual occurrence in railway surgery, is sufficiently frequent to give the surgeon considerable annoyance when it does occur. It is this class of cases that will cause you as much annoyance as any other class you may meet; at the same time, in the treatment of traumatic aneurysms we should be governed by two principal points: 1, the treatment in the primary stage; and 2, the treatment in the subsequent stage, what we might term the secondary stage of old traumatic aneurysm. In the treatment of the primary condition, such as was alluded to by Professor Bevan, we can readily understand that it would be necessary as a rule to apply a ligature, torsion, or some method which would get rid of a bleeding aneurysm, the sac of which was made up of the connective tissue, and which would be dangerous to allow to remain. I have in mind at present a case similar in character to the one reported by Professor Bevan, in which an injury occurred to the femoral artery, penetrating it from side to side, and also penetrating the vein, producing a punctured wound of both the femoral artery and femoral vein. The party was a male clerk on one of the roads running out of Columbus. The attending physician thought it was useless to do anything, and allowed the man to go without treatment, excepting to put him on his back and keep him as comfortable as possible. To his astonishment he got well with an aneurysm; in fact, he not only got well but lived and worked for fourteen years, with this aneurysm. It was situated about the region of Scarpa's triangle. Subsequently the man was taken sick and I was called to see him and observed this aneurysm. The man subsequently died of another sickness, which enabled us to make a *post-mortem* examination of the aneurysm which was the result of traumatism, and upon examining this we found that the artery had closed in this manner. We will suppose a gunshot wound or its equivalent passing through the artery from side to side, but immediately around the artery, the connective tissue formed an aneurysmal sac, just as described by Dr. Bevan, until it was perhaps as large as an orange. This sac was strong enough to hold the blood and become a part, as it were, of the walls of the artery. On the other side was a similar sac which was adherent to the vein. The connective tissue was pushed out by the force of the blood against the hole made in the vein and artery and plugged both. There was adhesion of the connective tissue to the vein which formed a sac around the artery, making a complete aneurysmal sac, and at the same time closing up the wound so there would be no escape of blood. This sac thickened and became so strong as to enable the man to go on with his work without difficulty, so far as the aneurysm was concerned.

There is one method of treatment that has not been touched upon here this afternoon, and that is the Macewan needle operation which, I think, in aneurysms of this character would be advisable. I do not think the needle operation, however, would be advisable in acute aneurysm, or in aneurysm due to a recent injury.

I do not think the wire operation of Professor Ransohoff, as advocated by him before the AMERICAN MEDICAL ASSOCIATION, would be of service. I think that method of treatment is absolutely dangerous on account of the liability to the formation of clots and emboli. I simply bring up these points as being important, and which have escaped attention, in speaking of the treatment of aneurysm, and more particularly the needle operation. I have seen Professor Senn use it successfully in the Presbyterian Hospital, of this city in several cases.

(To be continued.)

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SATURDAY, JANUARY 19, 1895.

FOOD AND DRUG ADULTERATION.

The earliest investigations into this subject conducted under National auspices were those made by PROFESSORS DIEHL and KEDZIE and DR. SMART of the Army, for the late NATIONAL BOARD OF HEALTH. The field of operations of the last named investigator was quite extensive and was intended to develop the amount and character of food adulteration in this country, with a view of determining whether federal legislation was needful for its suppression. The conclusions arrived at were that few of the adulterations then practiced were of a deleterious character, that they affected the pocket of the individual rather than his health, and that the question of legislation should therefore be viewed from the commercial rather than the sanitary standpoint.

Since then the Department of Agriculture has taken up the subject and published several reports, one of which, Bulletin No. 41, "On the Extent and Character of Food and Drug Adulteration, by ALEX. J. WEDDERBURN, Special Agent," is now before us. Earlier bulletins, particularly Nos. 13, 25 and 32, were valuable as giving the methods and results of analyses; but the benefit to be derived from the present issue is not so evident, as it consists mainly of communications from persons assumed from their position or occupation to have knowledge of the subject. PROFESSOR DIEHL in his report to the late NATIONAL BOARD OF HEALTH characterized communications of this kind as productive of no satisfactory result, the information furnished being too vague and general in its character. That he was correct in this estimate seems proved by the extracts published in Bulletin 41. Their general tenor goes no further than such assertions as, "I am sure," "I have no doubt," "it is my opinion," "I am credibly informed," or "there is no question," "that food adulteration is largely on the increase," etc.; although some acknowledge lack of specifications to sustain the charge: "While we have no evidence that would be worth anything to you, we do know that there is scarcely an article of food offered by the grocers throughout the country that is not adulterated." One reporter asserts that, "some of our flour is adulterated more or less with a certain kind of earth that comes from the South;" and in a list of the ordinary sophistications of foods and drugs arranged alphabetically by the compiler, we find, p. 51, under the title *Eggs*: "The yolks of eggs are now largely imitated, and it is stated that the whole egg is now successfully duplicated as a result of scientific genius." This recalls the sensational newspaper articles of HASSALL'S time which led the English cockney to look askance on milk as a possible emulsion of sheep's brains, prepared by the depraved and conscienceless inhabitants of the rural districts. Even some parts of MR. WEDDERBURN'S report are open to a similar criticism. He holds that the extent of adulteration of food and drugs is 15 per cent., although only 2 per cent. is of a character injurious to health. The cost of furnishing food, drink and drugs to 65,000,000 people, at an average weekly rate of $2 per head, amounts to $6,760,000,000, and 2 per cent. of this, or $135,200,000 is "the annual amount paid by the American people for having their lives taken or their health injured." PROFESSOR WILEY, the Chief of the Division of Chemistry, in a prefatory note, disclaims responsibility for the opinions of the correspondents cited in the published selections, as well as for some of the conclusions reached by the compiler; but in looking over the pages of this Bulletin the question constantly in mind is, Why should such statements have been published by a scientific bureau of a Governmental Department? A National food and drug law is sorely needed from the commercial point of view, for the protection of the individual as well as for that of legitimate industry and interstate and foreign commerce, and in some instances it may be urged from the sanitary standpoint; but evidence of the kind now presented is not likely to have much weight in effecting its passage.

Let there be created a Department of Public Health!

THE WORK OF THE SECTIONS.

At the risk of being somewhat tiresome, we once more venture to invite the attention of the members of the ASSOCIATION to the great advantage of concise writing, and short papers. The short paper is invariably read by the majority of the readers, the long paper is retained and perhaps laid on the shelf. The brief paper from which every superfluous word

has been carefully pruned, is more valuable than a paper involved in expression, and loaded with adjectives.

We have no quarrel with the complimentary adjective on its own account, nor with tropes and metaphor, but they have their place. That place is not found within the limits of a scientific paper read at a medical society for instruction.

We have once before mentioned the admirable work of the Surgical Section last year at San Francisco, but it will do no harm to again mention the fact that DR. ROBERTS, the Chairman, placed a time limit on the papers to be read at the meeting, and it was so announced in his circular calling for articles. The result was an admirable series of papers, fresh and bright with the individual thoughts of the authors themselves. In the average society paper, unless specially included in the historical class, there is no need of embodying in it, the entire history of the subject. The writing is not intended for the encyclopedia, but for current medical literature, and it will be remembered, as it is clear and distinct. If a writer can only rehash the cyclopedia or the text book, he would do well to decline to furnish papers; but every general practitioner of medicine and surgery, and as well every specialist in full practice, has so much information that he can communicate, that fortunately there is no need to weary the Section with page after page of matter already in print, that each may as well read for himself at his leisure. It is seldom necessary in our day to cite obsolete authors, except in purely historical studies, and it is questionable if long tables of bibliography should not be altogether omitted. These tables no longer prove the erudition of the writer, because they may be easily copied from the *Index Catalog* of the Surgeon General's Library and the *Index Medicus*.

The carefully written record of cases with appropriate comment is a style of medical writing that never grows old or obsolete. Hippocratic writings, almost the only ones of medicine that have lasted upwards of two thousand years, are full of case records and case histories, not the dry details, but an interesting summary.

The advantage to the consultant in having his papers read, is almost certain to cause him to write them short, so that his clientelage will read them. This advantage appeals to the consultant in a pecuniary sense, not less than the desire to go to posterity as an original worker and thinker. Every reader is not so fond of conciseness as LOUIS XIV., but many a consultant will be the better off by writing briefly and to the point.

An old and instructive story of LOUIS XIV., who loved conciseness, is to the effect that one day meeting a priest he said: "Whence came you—where are you going—what do you want?" The priest said: "From Limoges, to Bruges; a benefice." "You shall have it," said the King.

The great writers and orators of the past, whose works have lived, have transmitted to us models of conciseness, and they have been so transmitted because of that conciseness. Those ambitious to live in future pages, after personality has long past, will eschew long articles, and write with compactness.

NOT A "NEW" RULING.

Our esteemed contemporary, the *Tri-State Medical Journal*, has been led into an error of statement through the inadvertent "sidehead" of an item in the JOURNAL of October 20, ult. The decision of the Illinois State Board of Health, declining to recognize a degree granted by a dental, pharmacal or veterinary school as the equivalent of any part of the minimum requirements fixed by the Board as characterizing a medical college as in good standing, is not "a new ruling;" on the contrary, it has been in force during the last two years, having been adopted at the January, 1892, meeting of the Board after a consideration of the evidence presented by the Secretary, DR. REILLY, as to the wide disparity which then existed in the qualifications for the degrees of the various schools.

Judging from the following comments of the editor of the *Tri-State*, the objection to the recognition of such degrees is as weighty now as then. DR. MOORE says: "There is a grand opportunity for fraud in this connection. All over the land are 'colleges' and 'universities' teaching dentistry, veterinary science and pharmacy as side-shows. They are insignificant schools for whose existence no good reason has ever been offered. To accept the degree from such a school of mongrel pedigree as equivalent to one year's study in a medical college of high grade is wrong, and can result only in a lowering of the medical profession."

But this is by no means to say that there are not many reputable and estimable dental, pharmacal and veterinary schools in existence, the scope and thoroughness of whose instruction might well entitle their graduates to be entered as second-year students in medical colleges of high grade. The difficulty lies in the want of uniformity in the requirements for these degrees, and in the absence of a recognized standard the State Boards probably do wisely in rejecting all. Such sweeping rejection should lead to organizations of the better classes of these schools similar to the American Medical College Association, membership of which is now generally recognized as entitling a college to recognition by State Boards.

"A CLERICAL ERROR."

An observant correspondent of the JOURNAL—DR. W. H. SHARP, of Parkersburg, West Va.,—calls attention to what he kindly styles "a clerical error"

in the editorial comment on "Smallpox in 1894," published in the issue of January 5. It was therein attempted to contrast the mortality from smallpox in the ante-JENNERIAN period—96 smallpox deaths out of every 1,000 deaths from all causes—with the actual number of deaths from smallpox in 1894—less than 3,000 out of a total of 1,170,000 deaths from all causes, or about 2.5 smallpox deaths out of every 1,000 deaths from all causes. As printed in the JOURNAL the number of deaths from smallpox out of the total deaths was given as 12,300, instead of the correct figures 112,300, thus weakening the arithmetical force of the argument for vaccination by about nine-tenths, as DR. SHARP points out.

CORRESPONDENCE.

"The Practical Importance of Well Established Facts in Therapeutics."

CHICAGO, Jan. 15, 1895.

To the Editor:—Under this head, your correspondent, Dr. J. H. Stallard, gives in our JOURNAL for Jan. 5, 1895, an interesting account of his own experience in using alcohol in the form of brandy or whisky, apparently to prove that it is a true tonic and restorative. His first point of proof is that after having climbed to a height of 10,000 feet one morning, he took a hearty breakfast and, after only an hour's rest, began his return when the "heat was intense" and over glacier ice "as irregular and uncertain as on board of a ship." What is not singular, the intense heat, the presence of undigested food in his stomach, with the excitement of his unusual walk brought on extreme *irritability* of the pneumogastric and whole vasomotor system of nerves, indicated by excessive vomiting renewed at every attempt to proceed. In this dilemma, after his digestive organs had been emptied of their contents and the "intense heat" of midday had somewhat subsided, he was given a full dose of brandy which, by its *true anesthetic* effect, so far lessened the excitability of his cerebral and pneumogastric nerve cells that he was enabled to resume and complete his journey under the impression that he had on "a pair of brandy boots." I suppose an equivalent dose of ether, chloroform or any other reliable anesthetic would have produced the same effect. But is there no difference between an anesthetic and a stimulant or cardiac tonic?

Your correspondent's second point of proof is, the fact that at about the age of 62 years he had a sharp attack of pneumonia, took half ounce doses of brandy or whisky every two hours for nine days and his "recovery was perfect." But if his recovery proves that the alcohol was a "stimulant and heart tonic," what will he say in regard to the case of an eminent physician and medical teacher in one of our Eastern cities, who had a severe attack of pneumonia after he was 60 years of age, was promptly bled freely from a vein in his arm, and treated strictly according to the antiphlogistic system of the first half of the present century, and not only made a perfect recovery, but lived in fair health to the ripe age of 83 years. Does it prove that venesection and antimony are stimulants and heart tonics?

The third point of proof implied by the personal history of your correspondent is that he has attained the age of 74 years still in good health, though he has drank wine every day for over fifty years and as little water as possible. But, on the other hand, I well knew an eminent surgeon and teacher, who was through life a total abstainer from both alcohol and tobacco, and was somewhat of a vegetarian besides, who continued his professional duties until he was 80 years of age and died of old age at 86 years. And I could refer to a score of similar cases, some of whom reached their 100 years. If Dr. Stallard's condition at 74, affords any proof that wine is a stimulant or heart tonic, the other cases must prove that simple water is equally efficacious, to say the least. But, in truth, such personal histories prove nothing of value, for every well read physician knows that we meet with individual cases of unusual longevity in all classes of society, sometimes in the midst of poverty and unsanitary surroundings with bad food and drink, and sometimes in the mansions of luxury. Such histories of individual cases of disease only show that some persons possess a tenacity of life that enables them to recover *in spite* of the most injudicious treatment when sick, and attain longevity in spite of both bad habits and bad surroundings. To determine the actual effects of alcohol or of any other agent, on the living body requires a widely different line of investigation, at least, something more than the impressions of the patient while under the influence of the anesthetic.

Yours truly, N. S. DAVIS, M.D.

Treatment of Typhoid Fever.

ST. FRANCIS, ARK., Jan. 8, 1895.

To the Editor:—Having become interested last summer in Dr. Woodbridge's articles on the abortive treatment of typhoid fever, I determined to test it at the first opportunity. I had seen and assisted in treating quite a number of cases of typhoid fever in the Memphis City Hospital, having been an interne there for nearly two years, and have no recollection of any cases being free from fever under three weeks, although treated according to the latest and most approved methods. Last fall I treated several cases according to Dr. Woodbridge's plan and was exceedingly pleased with the results. I did not succeed in cutting the disease so short as Dr. Woodbridge did, on account of the method being new to me, and for other reasons, only giving prescription No. 1 every hour for twenty-four hours, then the guaiacol and eucalyptol every three hours for twenty-four hours, thus alternating them as I thought necessary. I was surprised to see how uniformly the temperature would drop from the effect of these antiseptics so frequently administered, only to rise again on leaving them off or reducing dose or frequency of administration. All of these cases recovered and only one had any bad nervous symptoms. Two of them were free of fever on the tenth day of treatment, two on the thirteenth, one on the fifteenth, one on the sixteenth and one on the seventeenth. In the case running for sixteen days, all medicine was left off—on the tenth day—by mistake, for eight hours, and the temperature which had fallen to 99.5 rose again and was 104 for two evenings. The highest temperature in the two worst cases was 105.5, and in none was it less than 104 for a few evenings, thus showing them to be severe cases. One case on the eighth day of the disease had incontinence of feces, the only one having any bad nervous symptoms. I was forcibly reminded and impressed with what Dr. J. B. Herrick, of Chicago, said about the effect of antiseptic treatment of typhoid fever. In an article headed, "A Synopsis of nearly a Thousand Cases of Typhoid Fever," he says that there is no doubt but that the antiseptic treatment of typhoid fever prevents the development of nervous symptoms. This article was published in our JOURNAL some time ago. I regard the treatment as being a vast improvement over any other and a boon to humanity. Dr. Woodbridge simply carried to the full extent what has been advocated for some years by quite a number of the most prominent men in the profession, and I think it a practical success and

not a therapeutic theory. There seems to be no doubt but that this frequent administration of antiseptics has an inhibitory influence on the typhoid bacilli, checking their activity, hence preventing the development of toxins, the absorption of which no doubt causes the grave nervousness in so many cases. I will say, in conclusion, that in none of these cases did fever exist over twenty-one days after beginning. Yours faithfully,

WM. BAYARD SHIELDS, M.D.

Treatment of Typhoid Fever.

ORAN, MO., Jan. 8, 1895.

To the Editor:—In our JOURNAL of January 5, I find a report on typhoid fever by Dr. Woodbridge and it reminds me of a report I made to the Southeastern Missouri Medical Association a few days before the Doctor made his report at Hot Springs. I reported a case of typhoid fever treated with *hyposulphite soda and Fowler's solution*, which gained over a pound a day during treatment. He ate his meals regularly, went to the table and to the privy (fifty yards distant from his hotel) his temperature ranging from 102½ to 105 for fifteen days. He ate largely of green apples, dates, oranges, lemons, anything he wanted (and could get), never complained of any pain, said he felt firstrate all the time, slept well, read the newspapers by day, and was a great Breckinridge man, they both being Kentuckians. I am as positive that this man had a genuine case of typhoid fever as I am that I am writing this squib.

Now what does my report and that of Dr. Woodbridge teach? Nothing, only that typhoid fever does not kill everybody that has it. I treated a babe, 2 years old, last week with as typical a case of typhoid fever as those described by Dr. Love in this same number of the JOURNAL. I gave it calomel and Dovers' powder 1 gr. each, every four hours for six days and *Fowler's solution* (Squibb's) ⅓ of a drop every two hours during the same time. This case was clear of fever on the tenth day and called for food. Can Dr. Woodbridge or any other man, do any better for typhoid fever than I did in these two cases? We did not use the same treatment but obtained the same results. Therefore the treatment is not entitled to all the credit.[1] I gave my doses two hours apart, allowing some time for sleep between doses. Any doctor who gives medicine every fifteen minutes for twenty-four hours ought to have mild cases to treat or be dosed himself for the next twenty-four hours.

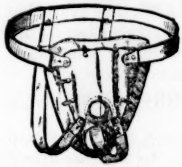
Dr. Woodbridge is an enthusiast, and evidently a good man, but there is nothing in his treatment that is new or an improvement on mine. Mine will only cure cases that would probably have gotten well without it—typhoid fever comes as near having its own way as any disease we have to treat. Dr. Woodbridge's treatment is like the homeopaths or the old woman's butter, "If it does no good it will do no harm." Dr. Woodbridge is full of enthusiasm; I am full of gall. This makes a stand off. He tells what he thinks is true; I tell what I think is true. Another stand off. The reader can take his choice of treatments—not forgetting that typhoid fever kills under all kinds of treatment, and that many cases get well under the most unfavorable conditions. W. P. HOWLE, M.D.

A New Truss—The Nagler Shield.

SAN FRANCISCO, CAL., Dec. 29, 1894.

To the Editor:—For the past few months I have been carefully investigating the virtues of a new mechanical device to act as a truss and abdominal supporter wherever such is indicated. It absolutely controls all protrusion and reduces to a minimum all discomfort from pressure or friction. It consists in its main features of an aluminium shield, carefully molded to the abdominal periphery, and suitably modified to conform to the anatomic requirements of either sex. The shield is lined with soft felt, in which pockets are formed, which can be filled with additional packing, should any particular case demand such support.

In extreme cases a padded metallic ring, surrounding the penis is fastened underneath on top of arched cut away portion of the shield, and this ring is pressed against that part of the pad where the opening for the scrotum is set in and when so adjusted to the body completely controls all possible prolapsus.



The Nagler Shield.

The pressure for the truss is created by the fastening of an elastic belt around the body, which is attached to a series of pins placed around the borders of the shield; this can be graded to suit the amount of pressure required. An additional mechanism prevents all vertical movement.

The complete truss is so simple and yet so effectual that nothing but actual experience of its use will convince those unacquainted with its virtues. The lightness of the material—an infantile umbilical truss not weighing over one ounce—and the freedom from friction go far to commend the application of this truss in all reducible hernias or lax abdominal walls.

FRED W. D'EVELYN, M.D.

One Hundred Thousand More.

PARKERSBURG, W. VA., Jan. 9, 1895.

To the Editor:—In your article on "Smallpox in 1894," in JOURNAL of January 5, occurs a clerical error on page 27, which destroys the force of the argument. Should read 112,300 deaths instead of 12,300, making the value of vaccination much less than it is. Yours,

W. H. SHARP, M.D.

Doctor Dana O. Weeks.

MARION, OHIO, Jan. 12, 1895.

To the Editor:—A mistake occurs in this week's issue of the JOURNAL, page 62, under Society News. Dana O. Weeks was elected President of Marion County Medical Society—not Dana O. Webb. Very truly yours,

O. W. WEEKS, M.D.

PUBLIC HEALTH.

Board of Health of North Carolina.—The December *Bulletin* of the North Carolina Board of Health makes announcement of the resignation of the President, Dr. H. T. Bahnson, of Salem, to become a director of the State Hospital at Morganton. Dr. George G. Thomas, of Wilmington, has been elected to succeed to the presidency. Dr. William P. Beall, of Greensborough, has been appointed by the Governor to fill the place in the Board.

Windmills for Sanitation.—A paper, at the Mexican capital, reports that a new project is on foot for the better sanitation of the sewer system of the City of Mexico. It is purposed to construct twenty-five windmills, at a cost of $25,-

[1] This is a non-sequitur, for Fowler's Solution is an excellent germicide, so also is calomel, and sodium hyposulphite.—ED.

000; these mills are to propel wheels or paddles within the sewers, and by them the rapidity of the current of the sewage is to be quickened.

Disinfection of Fecal Matter.—In a paper recently read before the Paris Academy of Sciences, M. Vincent claims that the best disinfecting agent for fecal matter and the contents of privies is sulphate of copper, especially if it has been previously acidulated with 10 per 1000 of sulphuric acid. For normal stools at a mean temperature of 16 C., disinfection is accomplished in twenty-four hours when the proportion of copper sulphate used is equal to 6 kilos per cubic meter; for typhoid stools 5 kilos, and for cholera stools 3.5 kilos per cubic meter are sufficient to destroy the microbes after a contact of twelve hours. This difference in the amount required is due to the fact that these pathologic stools are very fluid and contain pathogenic microörganisms which are less resistant than the saprophytes.

Bacteria in School Rooms.—In a recent communication to the Hamburg Medical Society, M. Ruete details the results of his bacteriologic examination of the air of school rooms. He made use of Hueppe's method and made his investigations at 2:30 in the afternoons. While these were always made under the same conditions the results were very variable. He found a minimum of 1,500 bacteria to the cubic meter, a maximum of 3,000,000, and a mean of 268,000. Analogous researches gave Hesse an average of only 9,500. Among the bacteria observed the author calls attention (*Bulletin Medical de Paris*) to a motile bacillus which does not develop on agar, but on gelatin plaques gives rise to circular colonies with crenated edges; it can also be cultivated on milk and potato; pure cultures kill mice in twenty-four hours and their blood is rapidly fatal to guinea pigs. Ruete has been able to extract toxins from the blood of animals thus killed.

Prophylaxis of Tuberculosis.—In his *Maladies du Soldat*, Professor Marvaud details the prophylactic measures employed in the French army against the spread of tuberculosis. These consist of: 1, the immediate discharge from service of all men affected with tuberculosis or likely to become so, such as those having weakly constitutions, vicious conformation of the chest, insufficient respiratory capacity, or hereditary tendency; 2, the prompt discharge of all who become affected during service; 3, preventive hygienic measures; location of barracks away from towns and on elevated and well-ventilated sites; thorough ventilation of squad-rooms, and day-rooms for the use of soldiers in inclement weather, antiseptics in spittoons and paraffined floors to prevent soiling with sputa, the disuse for a certain period of any squad-room in which cases have been developed, isolation wards, disinfection, attention to diet, the avoidance of sudden transitions from heat to cold, and the use of such exercises in the open air as tend to expand the chest. As the death rate from phthisis is 150 per cent. greater in the army than in the civil population of corresponding sex and age these prophylactic measures are of prime importance.

Michigan State Board of Health.—The Michigan State Board of Health held its quarterly meeting at the office of the Secretary, in the Capitol, at Lansing, Jan. 11, 1895. The meeting was called to order by President Frank Wells, of Lansing. Prof. Delos Fall, of Albion; Dr. Vaughan, of Ann Arbor; Dr. Gray, of Pontiac; Dr. Milner, of Grand Rapids; Dr. Granger, of Bay City, and Secretary Baker of Lansing, were present. The regular business including the auditing of bills and accounts was transacted. As special committee to report to the Board the advisability of entering upon the production of immunizing blood-serum for the use in the production of immunity from diphtheria, with a view of still further testing, in this country, the efficacy of the method. Dr. Vaughan, Director of the Michigan State Laboratory of Hygiene, reported that he had thoroughly considered the subject and concluded that at the present time the expense would be too great for the State Board of Health to undertake. It was suggested that the Board should take action to protect the people against the use of spurious antitoxins. On motion of Dr. Granger, the Board voted to appoint Prof. Victor C. Vaughan, M.D., Director of the Michigan State Laboratory of Hygiene, a special committee to test the immmunizing properties of samples of antitoxin offered for sale in Michigan.

Dr. Baker offered the following preambles and resolutions which were unanimously adopted:

WHEREAS, An accurate and prompt registration of the deaths and the causes of deaths in each locality of this State would be of very great practical usefulness to the work of this Board, and consequently of great value to the people of Michigan; and

WHEREAS, Under the present law, which has not been amended since 1869, the registration of vital statistics has failed to give accurate results, and to present them sufficiently early to be of the greatest practical sanitary use and public interest; therefore

Resolved, That the Michigan State Board of Health earnestly recommends the enactment of an improved law for the registration and return of deaths (and also of births) which law shall provide for their immediate record, and prompt report to the State Department.

Resolved, That a committee be appointed by this Board to present the subject to the Legislature, and to urge such action; said committee to act independently or in conjunction with similar committees of the Michigan State Medical Society, Michigan Academy of Science, or other organizations, as may be deemed advisable.

The subject was referred to the Committee on "Statistics of Mortality and Sickness," with request to act in accordance with the resolutions.

Dr. Vaughan, the committee, to whom was referred the subject of suspected poisoning by dried beef, at Somerset Center, Hillsdale County, reported that he had examined the dried beef, and found it contained a capsulated bacillus which when injected into white rats and guinea pigs promptly killed them, showing that it was a poisonous germ. Dr. Vaughan also reported relative to suspected poisoning by pressed chicken at Sturgis. During a banquet some two hundred persons were poisoned. A sample of the chicken was examined at the State Laboratory of Hygiene, and found to contain a short capsulated bacillus which was poisonous, but not of such a virulent character as the one found in the dried beef. It was found, by inoculation, that the germ would kill guinea pigs, but did not kill rats.

Dr. Milner, of Grand Rapids, Committee on Schools, was directed to prepare a bill, for introduction in the Legislature, which shall regulate the employment of teachers in our public schools, and professional nurses who are affected with any communicable form of tuberculosis. Instances have been noted and referred to by Dr. Milner at a previous meeting, where it is probable that tuberculosis (consumption) has been contracted from a teacher.

On motion, the Board voted to direct the Committee on Legislation, Dr. Granger, of Bay City, to confer with members of the State Live Stock Commission and the State Veterinarian, to prepare bills for the improvement of the sanitary laws of the State, relative to live stock, and to look to the introduction and passage of such bills.

The proposed bill for a "State Hospital for Consumptives," in connection with the State Laboratory of Hygiene at the University, was read section by section, amended and approved by the Board. The objects of the hospital are: 1, the proper care and treatment of persons having the disease known as consumption, phthisis, or tuberculosis, in order that the spread of this disease may be lessened; 2, the

training and education of persons who shall go out from that hospital, in the best methods for restricting the spread of this dangerous disease; 3, the training, in such methods of medical students who are to practice medicine in Michigan so that they may know how to restrict tuberculous diseases; and 4, that physicians and others may be enabled to study this disease under favorable conditions, thereby obtaining knowledge useful for the prevention of the spread of this disease, and for its ultimate restriction or extinction in Michigan.

Dr. Baker presented the subject of the need for legislation to prevent the introduction of dangerous diseases into localities in Michigan. He stated that there is no specific law on this subject, although he has several times drawn bills and had them introduced in the Legislature for this purpose. The present law is not operative until after the local board of health has made and published regulations.

By invitation of the Governor, the Board met the Governor in his room, for conference relative to the work of the Board, and a proposed increase in its scope, one question being whether the public interests might be better subserved if the Board were given power to stamp out dangerous diseases in localities where for any reason the local officers were unable or unwilling to take the proper measures.

State Sanitary Convention of Pennsylvania.—Preliminary announcement. The Eighth State Sanitary Convention of Pennsylvania, to be held under the combined auspices of the State Board of Health and Vital Statistics and of the State Associated Health Authorities, will convene in the Supreme Court room, Harrisburg, Jan. 30, 1895, at 10:30 A.M. The reports of the several standing committees of the State Associated Health Authorities -namely, the Committee on Legislation (E. S. Wagoner, of Mechanicsburg, Chairman); the Executive Committee (Dr. Benjamin Lee, of Philadelphia Chairman); and the Committee on Publication (M. G. Lippert, C.E., of Phœnixville, Chairman) will be read. The following subjects will be presented for discussion:

The Sanitary Treatment of Communicable Diseases; Compulsory Vaccination; The Best Means of Educating the General Public in Matters of Practical Hygiene; Typhoid Fever, the Curse of the Rural Districts; The Proper Use of Disinfectants.

An evening session will be held in the hall of the House of Representatives, at which subjects more especially connected with sanitary legislation will be presented. The Governor of the State, Gen. D. H. Hastings will be the presiding officer. The most prominent sanitarians in the State will take part in the discussions. While the attendance of local health authorities is expected to be very large, all persons of both sexes interested in the promotion of sanitary reform and organization will be welcome, and are urgently requested to attend.

Application for special rates for transportation should be made to the Secretary, 1400 Pine Street, Philadelphia. State railroad wished, and enclose stamp for return postage.

BENJAMIN LEE, M.D., Chairman Executive Committee.
WM. B. ATKINSON, M.D., Secretary.

ASSOCIATION NEWS.

The Baltimore Meeting.—The Committee of Arrangements has secured the new Music Hall for the meetings of the ASSOCIATION. This hall is just completed, and is one of the most comfortably arranged buildings in the country. The general sessions as well as all the section and committee meetings will be held in the same building. The rooms are large, comfortable, well lighted and ventilated. Access to the hall is convenient by lines of cable and trolley cars from all the hotels and in fact from any part of the city. The Committee on Halls has assigned rooms to all the sections. Chairmen or secretaries of sections are requested to forward to the Secretary of the Committee of Arrangements titles of papers at an early date so that a preliminary program can be printed in the JOURNAL not later than March 1.

GEORGE H. ROHÉ, Secretary.

Photographs of Members.—Members of the ASSOCIATION who send their photographs to the JOURNAL will find their contribution to the collection acknowledged under the heading of Letters Received.

SOCIETY NEWS.

The Wapello County (Iowa) Medical Society met January 3

The Central District Medical Society of Missouri held its regular meeting at Sedalia, Mo., January 3.

Berks County (Pa.) Medical Society.—The Berks County, Pa., Medical Society held its annual banquet at Mineral Springs, Pa., January 8.

Erie County (N.Y.) Medical Society.—At the annual meeting of the Erie County, N. Y., Medical Society the following officers were elected: President, Fred. W. Bartlett; Vice-President, Justin G. Thompson; Secretary, F. C. Gram.

The Lucas County (Ohio) Medical Society held its annual meeting in Toledo January 2. The following officers were elected for the ensuing year: President, John A. Wright; Vice-President, J. D. Howe; Secretary, F. O. Hunt.

Schuylkill County (Pa.) Medical Society.—The Schuylkill County (Pa.) Medical Society held its annual meeting in Pottsville January 8. The following officers were elected: President, C. W. Bankes, Middleport; Vice-President, A. P. Carr, St. Clair; Secretary and Treasurer, George Little, Tamaqua.

Kalamazoo (Mich.) Medical Society.—The Kalamazoo, Mich. Medical Society held its annual meeting January 8. The following officers were elected: President, O. A. Lacrones; First Vice-President, C. Van Zwaluwenburg; Second Vice-President, O. F. Burroughs; Secretary, J. W. Bosman.

Milwaukee (Wis.) Medical Society.—The Milwaukee, Wis., Medical Society held its annual meeting in that city January 8. The following officers were elected for the ensuing year: President, W. H. Washburn; First Vice-President, G. J. Kaumheimer; Second Vice-President, Lorenzo Boorse; Secretary, H. B. Hitz.

Kansas City Academy of Medicine.—The Kansas City Academy of Medicine held a regular meeting January 5. The following officers were elected for the ensuing year: President, John Punton; Vice-President, V. W. Gayle; Secretary, J. W. Kyger; Treasurer, C. L. Hall. The annual banquet was held January 8, and the event was a brilliant one.

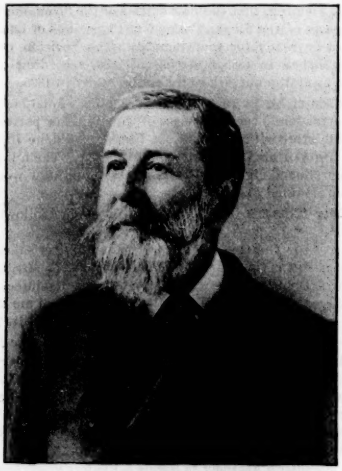
Iowa State Medical Society.—The forty-fourth annual meeting of the Iowa State Medical Society will be held April 17, 18 and 19, in Creston, Iowa, and the forty-sixth annual meeting of the AMERICAN MEDICAL ASSOCIATION will be held May 7, in Baltimore, Md., and it is hoped all will avail themselves of the benefits of these meetings and be present at both of them. The following are the chairmen of the different sections for the next meeting of the State Society: Medicine, F. M. Hiatt, Red Oak; Surgery, J. M. Emmert, Atlantic; Obstetrics and Gynecology, H. L. Getz, Marshalltown; Ophthalmology and Otology, H. B. Young, Burlington; Materia Medica, J. R. Guthrie, Dubuque; State Medicine and Hygiene, J. S. Braunsworth, Muscatine; Mental and Nervous System, F. S. Thomas, Council Bluffs.

The announcement program will be mailed about April 1.

J. W. COKENOWER, M.D., Secretary.

NECROLOGY.

JOHN MILLS BROWNE, ex-Surgeon-General, U. S. Navy. Born in Hinsdale, N.H., May 10, 1831. Graduated at the Medical Department of Harvard University in March, 1852. Appointed from New Hampshire, March 25, 1853; entered the service as Assistant Surgeon, and performed first duty on board the store-ship, *Warren*, Lieutenant commanding, Fabius Stanly, at Saucelito, opposite San Francisco; in September, 1854, the *Warren*, Lieutenant commanding, D. McDougall, prooeeded to Mare Island, and became the temporary residence of Commander D. G. Farragut, the inaugurator and first Commandant of the Navy Yard; Medical Officer of the Navy Yard until May 10, 1855; then duty on board the coast survey steamer, *Active*, Lieutenant commanding, James Alden; attached to *Active* until November, 1857; *Active* employed in surveying the coast and harbors of California, Oregon and Washington Territories, in the winter of 1855–56, with the steamer *Massachusetts* and the sloop *Decatur; Active* engaged in the Indian war at Puget Sound;



JOHN MILLS BROWNE, M.D.

and in the summer of 1857, in connection with H. B. M. sloop *Sattelite*, occupied in settling the northwest boundary. Passed Assistant Surgeon, May 12, 1858; brig *Dolphin*, Lieutenant commanding, John N. Maffit, June 1, 1858, Home Squadron off Cape Verde, Cuba, *Dolphin* captured the brig *Echo* with over three hundred slaves destined for the Cuban market; *Echo* sent to Charleston, S. C., subsequently the surviving negroes were taken to Liberia in the frigate *Niagara;* Oct. 1, 1858, steamer *Atlanta*, Commander D. B. Ridgly, Paraguay expedition; Dec. 25, 1858, Hospital Norfolk, Surgeon Ninian Pinkney; May 9, 1859, sloop *Constellation* Flag Officer Wm. Inman, Fleet Surgeon, Thos. D. Smith, flag ship of African Squadron; visited Madeira, Cape de Verde Islands, St. Helena, Liberia, St. Paulo de Loanda and other ports and islands along the west coast of Africa; Sept. 25, 1860, at night off Congo River, *Constellation* captured the bark *Cora*, with 705 slaves, who were sent to Liberia; commissioned as Surgeon, June 19, 1861; Dec. 23, 1861, steam sloop *Kearsarge*, Commander Charles W. Pickering, special duty coast of Europe; visited Cadiz, Algeciras, Gibraltar, Tangier, Ferral, Brest, Cherbourg, Boulogne-*sur-mer*, Calais, Ostend, Flushing, London, Margate, Ramsgate, Deal, Dover, Folkstone, Hastings, Queenstown, Azores, Madeira, Teneriffe; off Cherbourg, June 19, 1864, *Kearsarge*, Commander John A. Winslow, after an engagement of one hour and two minutes' destroyed the rebel steamer *Alabama; Kearsarge* left Europe in August, 1864, for the Azores, and from thence proceeded to Fernando de Noroha, and Las Rocas, off Brazil, in search of the rebel steamer *Florida;* returned to Barbadoes, thence to St. Thomas, and arrived at Boston Nov. 9, 1864; Dec. 23, 1864, temporary duty Navy Yard, New York; April 29, 1865, Navy Yard, Mare Island; special duty to superintend the erection of the Naval Hospital at Mare Island; duty in charge of the hospital at Mare Island 1870–71; Fleet Surgeon Pacific fleet 1871–72. Commissioned as Medical Inspector Dec. 1, 1871; Navy Yard and Naval Hospital, Mare Island, 1873–74; Fleet Surgeon, North Pacific station, 1874–76; Naval Hospital, Mare Island, 1876–80. Commissioned as Medical Director, Oct. 6, 1878, President of Medical Examining Board, Washington, D. C., 1880–82; member of Board of Visitors, Naval Academy, Annapolis, Md., 1881; naval representative at the International Medical Congress, London, England, 1881; duty in charge of Museum of Hygiene, 1882–85; duty on Board of Naval Regulations, 1882; member of National Board of Health 1883; naval representative at the International Medical Congress, Copenhagen, 1884; Member of Retiring Board, 1885–88. Chief of Bureau of Medicine and Surgery, with title of Surgeon-General of the Navy, from April 2, 1888, until date of retirement, May 10, 1893. (Official record in Naval Register.) Died Dec. 7, 1894.

WILLIAM DETMOLD, M.D., one of the senior surgeons of New York City, and a founder and first President of the New York County Medical Association in 1884, died Dec. 26, 1894. He was born in Hanover, Dec. 27, 1808. After taking his medical degree at Göttingen in 1830, he was for a time in the surgical service of the Army. He took up his permanent residence in New York in 1837, and very soon thereafter became identified with the College of Physicians and Surgeons; of this school he was Emeritus Professor of Clinical and Military Surgery at the time of his decease. This embraces a period of more than half a century. He was one of the founders of orthopedics in this country; his first clinic dating as early as 1841. At the opening of the Civil War (1862), he was made full Professor of Military Surgery and Hygiene. His services at this time were much in request in the organization of medical corps and hospitals, especially those that were called into being in the vicinity of New York City, for the use of the State volunteers. He was an infrequent writer on medical topics, but his little book on club foot and some analogous subjects is one of the mile-stones of the pre-Listerian epochs of orthopedy. He was an ex-Vice-President of the Academy of Medicine and an ex-President of the Medical Relief Fund for Widows and Orphans. He had been a Consulting Surgeon to the Presbyterian Hospital. General paralysis was assigned as the cause of his last illness and death.

HENRY GOLDTHWAITE, M.D., of New York City, died January 4, aged 53 years. He was a native of Mobile, the son of the late Judge of the Supreme Court of Alabama. He was graduated from Princeton College in the class of 1860. He became a Confederate staff officer, attaining the rank of Major. After the war, he was in business in his native city, but he adopted medicine as his preferable pursuit. He graduated from Bellevue Hospital Medical College in 1876, and was next an interne at the Hospital and an instructor in the College. In 1878 he became one of the physicians resident at the Fifth Avenue Hotel, and it was there that he died somewhat suddenly from cerebral hemorrhage, on the date above named. He was twice married. He was a member of several local societies, and one of the visiting staff of the City or Charity Hospital.

CHARLES WRIGHT, M.D., of Carroll, Ala., January 3.—— Jonathan Bemis, M.D., of Cambridge, Mass., January 6, aged 84.——E. H. Porter, M.D., of Columbia, Mo., January 4. ——William Mercer, of Princeton, Ill., January 4, aged 80. ——F. A. White, of Philadelphia, Pa., January 8, aged 38.—— Stephen W. Root, of New York, January 5, aged 61.——Joseph S. Fitzgerald, of New York, January 8.——G. G. Upson, of Cuyahoga Falls, Ohio, January 7, aged 73.——J. D. Egelston, of Olathe, Kan., January 11, aged 67.——A. C. Hallam, of Brooklyn, N. Y., January 9, aged 49.

BOOK NOTICES.

Travaux d'Electrotherapie Gynecologique, Etc., Etc. By G. APOSTOLI. Paris. 1894.

The volume before us is a collection of articles written on the subject of electro-therapeutics in gynecology, and from the prospectus we learn that it will be published semi-annually. The editor has very industriously sought all foreign publications for writings on his specialty and has in most cases translated them bodily into French and the result is this volume of 720 pages. The Americans quoted are Drs. Rockwell, Goelet, McGinnis, Buckmaster, A. Lapthorne Smith, F. H. Martin, Massey, Skene, Mundé and J. H. Kellogg. Those who wish to keep pace with the entire literature of this subject will find this volume a necessity.

Sexual Neurasthenia (Nervous Exhaustion), Its Hygiene, Causes, Symptoms and Treatment, with a chapter on diet for the nervous. By GEORGE M. BEARD, A.M., M.D. Edited with notes and additions by A. D. ROCKWELL, A.M., M.D. Fourth edition. New York: E. B. Treat. 1895. Price $2.75.

This well-known book has, as will be seen, passed to a fourth edition. A chapter on Sexual Erethism has been inserted in this edition in order to keep pace with the growing literature on the subject. In the formulas, Mr. Rockwell has translated the old English weights and measures into the decimal system, instead of writing them in that system *de novo*. The result is that the decimals are too fractional to conform to any known prescription in the metric system. The old system is also given. The work is an excellent one, and well deserves the compliment of a fourth edition.

Twenty-fifth Annual Report of the State Board of Health of Massachusetts. Boston. 1894.

Bearing in mind the noble record made by this Board in the last quarter of a century, and the high class of its annual reports, we naturally turn to the new volume to see if it keeps up the standard established by its predecessors, and are pleased to see that the mantle of Bowditch has fallen on worthy shoulders in the person of Chairman Wolcott. The present volume includes the general report, and a series of special reports on the subject of Water Supply and Sewerage; Weekly Mortality Reports of Cities and Towns; Reports of Infectious Diseases; Reports of Food and Drug Inspection; Isolation Hospitals for Infectious Diseases, and Report on the Health of Towns.

Apart from the chemists' reports, in themselves extremely valuable as showing careful and painstaking work, we must notice the article of the Secretary, S. W. Abbott, M.D., on Isolation Hospitals. After a review of the origin of this special class of hospitals, the author mentions the isolation hospitals of the principal cities of Europe, and gives plans of some of them. This will be found invaluable for health officers desiring to construct similar hospitals.

Saint Thomas' Hospital Reports. New series. Edited by DR. T. D. ACLAND and MR. BERNARD PITTS. Vol. XXII, pp. 614. London: J. and A. Churchill. 1894.

This volume contains the statistical reports of this famous hospital, for 1892 and 1893, and its publication was this year delayed that the calendar and prospectus for 1894 might be included. The papers in the volume are generally excellent, and well reflect the existing state of British medicine and surgery. They are as follows:

I, The Treatment of Hallux Valgus by H. H. Clutton; II, Case of Separation of Lower Epiphysis of Femur—Gangrene, Amputation, Pyæmia, Death, by H. H. Clutton; III, Traumatic Separation of the Upper End of the Femur in Early Life, by William Henry Battle; IV, Acute Osteo-periostitis of the Femora, etc., by William Henry Battle; V, Acute Bronchiectasis, by Seymour J. Sharkey; VI, Pregnancy in a Uni-cervical Bicornate Uterus, by W. W. H. Tate; VII, Sterilized Surgical Dressings and Sterilized Water, by Edmund White; VIII, A Case of Gangrene of Foot with Sugar in the Urine, Amputation, by Cuthbert S. Wallace; IX, The Removal of the Uterine Appendages for Uterine Myoma, with an account of Twenty Cases, by Chas. J. Cullingworth. The remainder of the volume is taken up with the reports of the several departments of the hospital for the years 1892 and 1893. There is a very interesting biography of the late George Rainey who was connected with Saint Thomas Medical School for nearly sixty years, and for nearly forty years as a teacher of anatomy, and demonstrator of the microscope.

MISCELLANY.

Dr. Charles G. Carleton, of Lawrence, Mass., has been appointed City Physician of that place, *vice* Dr. Howe resigned.

Nomenclature of Diseases.—It is stated on the authority of Mr. W. Fleming, that the new edition of the "Nomenclature of Diseases of the Royal College of Physicians of London," will not be ready for some months. The revision of 1880 was published in 1885, and that of 1890, according to the foregoing statement will probably be ready in 1895.

Injection of Air in Tuberculous Peritonitis.—Folet, of Lille, at the Académie reports a case of tuberculous peritonitis, in which after withdrawal of six liters of fluid, he injected three liters of air in the abdominal cavity. The fluid was not reproduced eight months afterward and the woman's health remained excellent.

Another "Citizen's Complaint" Impending.—The following is from *Puck:*

"Across the Court.—*Mrs. Keegan:* 'Fer hivin's sake, Mrs. Casey, phwut is thot turrible shmellin' smoke?' *Mrs. Casey:* 'It's Mrs. Dooney below wid phwut she calls dishinfectants.' *Mrs. Keegan:* 'Well, will yez plaze tell her from me thot if she don't shtop it Oi'll complain to the Board of Hilth?'"

New Journals.—*The Journal of Medicine and Science,* published in Portland, Maine, starts its second number with the announcement that its "circulation" is 30,000. We trust that the affidavit editor may always be able to retain so handsome a circulation.

The Dental Digest is on our table, an excellent journal handsomely printed and carefully prepared.

The Vermiform Appendix in Hernia.—Kraft, (*Nordisht Médic. Arch.* No. 23, 1894) reports seven cases of hernia; in three cases the sac contained the appendix alone, and in the remaining four cases he found the appendix with a knuckle of intestine. In practice when the appendix was neither gangrenous, nor perforated he reduced it; but in case of gangrene or perforation, resection was indicated.—*Revue Internationale de Medecine et de Chirurgie pratiques.*

Students in German Universities.—Ascherson's *Universitats Kalendar* gives the following figures for the twenty German universities in 1894: The total number of students is 28,448, 8,684 of whom study medicine; 7,776 law; 3,336 Protestant theology, and 1,469 Catholic theology. Berlin heads the list with 4,265 students; then comes Munich with 3,744; Leipsic with 2,764; Halle, 2,154; Tubingen, 1,477, and so on. Rostoch is the lowest, with 476.

Treatment of Synovial Ganglion.—Professor Duplay in a recent article (*Arch. General de Mèd.* December, 1894), recommends the return to the former practice of iodin injection. The skin is to be well washed and sterilized. The hypodermatic needle is then introduced into the skin and made to glide

over the swelling a little, so that the opening into the sac and through the skin may not be opposite. From five to ten drops of the tincture of iodin are then injected, the amount varying according to the size of the ganglion; an aseptic cotton pad is applied over the puncture, which sometimes requires to be repeated. M. Duplay has had no failure, but some cases required more than one operation.

Mentholated Oil.—One of the remedies employed by Dr. Louis Martin, chief assistant to Dr. Roux, is this oil. It is referred to in a recent number of the *Bulletin Medical*, in a lecture delivered at Pasteur Institute. Its use is to avert broncho-pneumonia in cases under treatment by the serum, and one cubic centimeter is given once a day. The oil is composed of 4 grammes of menthol to 100 grammes of the oil of sweet almonds. As to the local treatment of cases of diphtheria, the lecturer states that caustic treatments are to be excluded. Phenic acid and sublimate solutions are now little used. Dr. Roux counsels the washing three times a day with solutions of boric acid or a solution of Labarrague's liquor, fifty grammes in one liter of boiled water. The feeding of children, under the serum treatment, should not be changed. They should be well supported, whenever the existence of serious albuminuria does not compel the employment of an exclusive milk diet.

Cocain in Rigidity of the Uterine Neck.—Farrar (Obstetrical Society of London November, 1894) has successfully employed cocain in two cases of rigidity of the cervix in the course of labor. In the first case, a primipara, the labor had been retarded more than forty-eight hours. Chloroform had been administered without relief; intending to incise the neck, he applied a compress saturated with a 10 per cent. solution of cocain and retained it for three minutes. On examination he found that even in this short space of time, dilatation had progressed with rapidity, and the case terminated normally. The second case was a primipara 40 years of age, and there was a rigidity of the cervix which had resisted the pains for three days, and as well all the means of non-operative dilatation. The application of a 10 per cent. solution of cocain caused a rapid dilatation.

Pigmentation from Arsenic.—Richardiere recently presented a patient at the Hospitals Medical Society of Paris (*Ann. de Derm. et de Syph.*)—a female aged 19, suffering from adenia—in whom injections of 42 drops of Fowler's solution and the internal administration of 500 drops of the solution produced a general pigmentation resembling the skin of a mulattress and almost black in the axillæ, neck and fingers. After ceasing the use of the arsenic the pigmentation decreased and was followed by desquamation. This pigmentary deposit was the principal sign of arsenicism, which was manifested otherwise only by a slight diarrhea and some paresis of the right leg. M. Rendu asked whether the generalized character of the pigmentation did not point to tuberculosis of the supra-renal capsules.

Uses of Erysipelas Serum.—Emmerich has recently experimented with serum from erysipelatous animals as to its effect upon anthrax. After infecting rabbits with the latter disease he injected up to 20 cc. of the serum either into the peritoneal cavities or under the skin; these injections were repeated twice daily for two or three days. No anthrax developed. The author thinks (*Gaz. Med. de Liege*), that we may possibly employ the serum with success in the treatment of tuberculosis. He inoculated rabbits by introducing the tubercle bacilli into the anterior chamber of the eye, and having found the tubercles there developing he then infected the animal with the erysipelas microbes, whereupon the tuberculous process was slowed but not stopped. Emmerich concludes that his experiments warrant further researches into the uses of erysipelas serum, not in human tuberculosis alone but also in other infectious diseases, such as glanders, syphilis, tetanus, etc.

Pyoktannin in Blennorrhagia.—According to *Vratch*, No. 11, 1895, Posselt has employed pyoktannin in eighty-five cases of blennorrhagia, thirteen of which were subacute, twelve chronic and sixty acute, also two cases of blennorrheal conjunctivitis and two cases of blennorrheal cystitis. The intra-urethral injections were made from two to four times a day with solutions of from 1 to 1000, to 1 to 2000. The patient was directed to retain the injected liquid one minute. In sixty-eight patients the injections were painless, in three there were intense pains but inconstant, and in one the author was obliged to relinquish the treatment on account of the pain. After a lengthy account of the microscopic appearances of the pus and the gonococci, the author concludes, by stating that pyoktannin is a good remedy in the treatment of blennorrhagia, but it must be used with care, on account of its irritant action, and care taken that the solution is not too concentrated; 1 to 1000 to 1 to 2000 should be the maximum, but that which renders pyoktannin little appropriate in private practice is the violet stain which it gives the hands, and the under linen of the patient.

Local Application of Carbolic Acid.—Cerné, of Rouen, reports the two following cases in the *Normandie Medicale:* A diabetic male had an insignificant wound of the leg dressed with a compress wet with a weak carbolic acid solution; this produced gangrene which increased in size daily. The patient went to an empiric who replaced the carbolic acid by an ointment of some sort and the gangrene was arrested. The second case was that of an alcoholic, with sclerosis and perforating ulcer of the left great toe; this was dressed with a carbolic solution of 1 to 40; on the second morning all the end of the toe was gangrenous. These cases show the dangers which may result from the local application of carbolic acid, especially if made by the patient himself—that is to say, without precaution or measure. Caution should be exercised in the use of carbolic dressings; the danger is greater when, from any cause, the tissues have less than their normal vitality.

A Deserved Tribute.—Treating of the abridgment of *Observations upon the Medical Department of the British Army*, made by Brevet Lieutenant-Colonel Alfred A. Woodhull, U. S. A. Medical Corps, the reviewer of the *British Medical Journal* says, "the abridgment is such an admirable summary of the organization and regulations of our [the British] army medical department that it might be perused with advantage by the medical officers themselves; every point, almost, is reviewed with surprising accuracy and any misstatements are of the most trifling character. We have always been struck with the general excellence of reports issued by the War Department of the United States, both as regards matter and form. It would seem in America that when a competent officer is selected to report he is allowed a free hand as to scope, style and length; his work is apparently not mutilated by superior intelligence at headquarters, nor cut down by a stingy printing office." Surgeon Woodhull himself is spoken of in an equally laudatory manner; his competency to criticise is fully acknowledged and frequent citations warrant the reviewer in closing with the remark that, "From all of which it will be seen that our American cousin is a just as well as a frank critic in army medical matters."

Alterations of the Urine in Malaria.—At a recent séance of the Vienna Imperio-Royal Medical Society, reported in *La Semaine Medicale*, von Limbeck related the results of researches which he had made in two cases of malaria. In these cases the elimination of nitrogen was in relation with the elevation of temperature; the proportion of urea and the total quantity of nitrogen were not modified; the elimination of ammonia also was in direct relation to the elevation of temperature; the quantity of urea was augmented but the relation between the ammonia and the total quantity of nitrogen was normal. During the febrile accession the quantity of phosphates was found diminished; they did not increase until after the access. Freund had also found a retention of phosphates during the febrile stage in some other infectious diseases. The elimination of chlorids, contrary to what occurs in other infectious diseases, is enormously increased during the malarial paroxysms; this fact is so characteristic that the author thinks it may be accorded a real diagnostic value.

Columbia College.—At a meeting of the trustees of Columbia College, at New York, January 7, it was announced that two large gifts had been made to the College of Physicians and Surgeons. One is of $350,000 from Cornelius, William K., Frederick W., and George W. Vanderbilt, who contributed an equal amount each. The other is from William D. Sloan, who will erect a new maternity hospital to connect with the present one, the whole to be known as the Sloan Maternity Hospital. The estimated cost is $200,000.

Hospital Notes.

FREE HOSPITAL FOR WOMEN.—The new Free Hospital for Women at Boston, Mass., was formally opened January 1. There are twenty patients in the institution.

ST. JOSEPH'S HOSPITAL.—An addition to St. Joseph's Hospital at Bloomington, Ill., is contemplated; the estimated cost is $1,000.

A NEW HOSPITAL FOR INSANE.—Estimates have been prepared for the rebuilding of the hospital for the insane at Anna, Ill., which was recently destroyed by fire. The Legislature will be asked to appropriate $200,000 for that purpose.

DR. R. D. BURNS, of Allegheny, Pa., has been elected the resident physician at the Allegheny General Hospital, *vice*, Dr. Shaler resigned.

THE LANE HOSPITAL at San Francisco, Cal., was formally opened January 8. The building will accommodate 100 patients and cost $230,000.

GRADY HOSPITAL.—The annual report of the Grady Hospital at Atlanta, Ga., shows that 1,640 patients have been treated at that institution during the past year.

THE NEW MERCY HOSPITAL at Des Moines, Iowa, will be ready for occupancy February 1. The total cost will be about $20,000.

NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.—The tenth annual report of the New York Post-Graduate Medical School and Hospital shows that 17,833 patients have been treated in the dispensary and 1,300 in the wards.

CHILDREN'S HOSPITAL, BUFFALO, N. Y.—At a meeting of the managers of Children's Hospital at Buffalo, N. Y., January 3, it was decided to appropriate the $1,200 raised at the Christmas sale for the endowment of four free beds.

FOR A CONSUMPTIVE HOSPITAL.—It is reported that the estate of Gen. Benjamin F. Butler has decided to turn over Old Fort Union in New Mexico for the use of consumptives. The property contains about 67,000 acres.

ST. TIMOTHY'S HOSPITAL PHILADELPHIA.—Under the will of Henry Klein, M.D., of Philadelphia, liberal gifts have been left to three religious bodies having their headquarters in that city; the residue of his estate is to go to Saint Timothy's Hospital.

MASSACHUSETTS HOSPITAL FOR INSANE.—The State Asylum at Waverly, Mass., has received a much-needed remembrance under the will of the late Thomas E. Proctor, of Boston. The managers of the General Hospital are to be made the custodians of $100,000, that will be in trust until it shall with accrued interest reach the value of $400,000. Then the amount may be used in the construction of buildings, at the new grounds of the McLean Asylum for the Insane at the place named above, to be devoted to that branch of the General Hospital.

Louisville Notes.

DR. C. J. WALTON.—Dr. Clairborne J. Walton, of Hodgenville, Ky., is mentioned as a candidate before the Republican Convention for nomination as State Auditor. Dr. Walton was a Brigade Surgeon in the Union Army under Gen. S. W. Price, and during Harrison's administration was Pension Agent.

DR. JAMES WEIR, JR.—Dr. James Weir, Jr., of Owensboro, has been tendered the chair of Nervous and Mental Diseases in the Gross Medical College of Denver, Colo., by the Dean of that College, Dr. F. H. Hawkins. The Doctor has not as yet accepted the call.

PURE FOOD EXPOSITION.—This Exposition has again been postponed, at the request of the grocers interested. Many manufacturers of food products who were unable to get their exhibits ready during the holiday season, have consented to make their displays if the exposition is postponed. The date now set is the first or second week in March, and it will continue three weeks.

BLOOD POISONING.—It is greatly to be regretted that so many surgeons fall a martyr to their calling, but it seems to be an almost daily occurrence for trouble of more or less serious character to fall to the lot of the surgeon. Dr. Ap. Morgan Cartledge, of this city, has been confined to his bed for some weeks the result of a wound received while operating upon a septic case of appendicitis. He is much improved at the present writing though still confined to his room. Dr. Arch Dixon, Jr., of Henderson, is also the victim of a similar accident, having been quite ill in Frankfort whether he had gone soon after, as the result of inoculation.

DR. W. L. CLAY.—Dr. Clay, a member of the prominent Clay family of Paris, this State, was found lying dead in his bed at his home in this city—the coroner's verdict being apoplexy. Dr. Clay was born in Paris, Ky., fifty-five years ago. He had lived in this city for the past sixteen years. He belonged to General Morgan's command during the late war and was a member at the time of his death of the Confederate Veterans' Association of Lexington, Ky.

STATE BOARD OF HEALTH.—This Board held a meeting on the 5th inst., those present being Dr. Jos. M. Mathews, Louisville, President; Dr. J. N. McCormack, Bowling Green, Secretary; Drs. George Beeler, Clinton; Wm. Bailey, Louisville; Arch Dixon, Henderson. Dr. J. N. McCormack was unanimously elected Secretary, his term of office having expired. Several cases of alleged violation of the Kentucky practice law came before the Board, and a number were refused licenses. The case of Dr. H. H. Gwynn, of Louisville, was taken up, as he had asked for a rehearing. As the applicant was not present, his examination papers were read, and the answers appearing unsatisfactory in every branch his application was denied. Dr. Gwynn has been tried once for practicing illegally, and fined. He came before the Board and stood an examination, and upon these papers was refused a license.

During the session the following telegram was received from the Governor:

"Information received that cattle are dying at Nicholasville, Jessamine County, presumably from pleuro-pneumonia. Please take immediate steps to investigate." JOHN YOUNG BROWN.

Instructions were immediately wired Dr. E. T. Hagyard, State Veterinarian, at Lexington, to proceed to Nicholasville, investigate and report to the Board. The only cases of pleuro-pneumonia among cattle were those of the Harrison County epidemic, seven years ago, which was stamped out at a cost to the State of $2,400. The State Veterinarian has rendered the report of his investigation of the alleged cases of pleuro-pneumonia in cattle. He found the cattle complained of in a remote part of the county and four of the herd had died, not from pleuro-pneumonia but from inflammation of the stomach caused by some poison. This is the second report recently which has been proven without foundation, in regard to pleuro-pneumonia in Kentucky cattle. The investigation was complete, and is thoroughly to be relied upon, and Dr. McCormack will officially report the above facts to Governor Brown.

FALLS CITY MEDICAL SOCIETY.—This society met at the Kenton Club, on the evening of the 9th inst., the guest of Dr. Louis Frank. The paper of the evening was read by Dr. Frank; the subject, "Empyema." Two cases were reported in which operations of resection of the ribs was made; in one of them a solution of iodoformized oil was injected into the cavity, under which treatment the case made a rapid recovery. Dr. Howard reported some cases relieved by hypnotic suggestion.

DEATH REPORT.—The report for the week gives a total of eighty-two deaths. The mortality from pneumonia still exceeds that from any other disease, there being seventeen from this cause and ten from consumption.

CITY HOSPITAL.—Superintendent Barbour states that the Hospital is so crowded that orders have been given to the attending physicians to discharge all patients that can possibly leave the hospital, in order to make room for the new applicants.

MASONIC WIDOWS' AND ORPHANS' HOME.—At the regular annual meeting of the directors of the Home, the following staff was elected for 1895: Dr. P. B. Scott, Physician in Charge; Dr. John G. Cecil, Consulting Physician; Dr. Frank Simpson, Visiting Physician; Dr. Henry E. Tuley, Assistant Visiting Physician; Dr. Ap. Morgan Vance, Visiting Surgeon; Dr. Wm. Cheatham, Oculist and Aurist; Dr. W. B. Pusey, Assistant Oculist and Aurist; Dr. I. N. Bloom, Dermatologist; Dr. Chas. E. Dunn, Dentist; Miss Anna Davies, Resident Nurse.

THE HOSPITAL COLLEGE OF MEDICINE OF LOUISVILLE entered upon its twenty-first annual session on the second day of the current month under the most favorable auspices. There were 172 matriculates at the beginning of the session, being the largest number on the opening day of any previous year in the history of the college. One year ago the college moved into the handsome new building provided for it by the Trustees of the Central University of Kentucky, of which it is the Medical Department. Since that time the laboratories have been thoroughly equipped and in both the clinical and laboratory teaching additional instructors have been provided. This college was the first of the Southern colleges to adopt the three-year graded course, and for several years the classes were depleted in consequence. The large attendance at the opening of this session demonstrates that the profession approves of the advanced position taken by this college, and that professional sentiment in the South is in thorough accord with that of the North and East, relative to higher medical education.

Washington Notes.

MEDICAL SOCIETY OF THE DISTRICT.—The stated meeting of the Society was held on the 3d inst., and the following officers elected: Dr. S. C. Busey, President; Drs. Thomas N. McLaughlin and Geo. L. Magruder, Vice-Presidents; Dr. Thomas C. Smith, Corresponding Secretary; Dr. Samuel S. Adams, Recording Secretary; Dr. C. W. Franzoni, Treasurer; Dr. E. L. Morgan, Librarian. Drs. J. T. Winter, E. F. King, C. W. Richardson, Censors; Drs. C. H. A. Kleinschmidt, G. N. Acker, S. S. Adams, G. C. Ober, W. S. Bowen, Board of Examiners. The constitution was amended so as to allow prominent members (non-medical) of the different scientific departments of the National Government to become members of the Society by invitation. Two new committees were created, viz., Committee on Public Health, composed of seven members which shall report in January at the stated meeting of the Society, on the general health of the District. Committee on Legislation, composed of seven members which shall have charge of all matters of a legal character.

At the regular weekly meeting of the Society, held on the 9th inst., Dr. Kinyoun, of the Marine-Hospital Service, presented the subject of antitoxin treatment of diphtheria to the Society in his usual clear, concise and scientific manner, and in conclusion urged the importance of the supervision of the Government over all manufacture and distribution of the new substance, antitoxin. Dr. Walter Reed, Surgeon U. S. A., opened the discussion, and added considerable information to that already imparted by Dr. Kinyoun. He called special attention to some personal experiments at the Museum in this city, and showed how his bacteriologic test was delayed by the previous application of antiseptics to the mucous membranes from which cultures were afterward made. Dr. Lamb presented a case and specimen of appendicitis.

THE WASHINGTON OBSTETRICAL AND GYNECOLOGICAL SOCIETY.—The two hundred and twentieth meeting of the Washington Obstetrical and Gynecological Society was held on the 4th inst. Dr. G. N. Acker reported a case of ante-partum hemorrhage with death of child, and Dr. E. L. Tompkins presented a patient with polio-myelitis anterior, and read a very instructive paper on the subject. Both papers were very fully discussed. Dr. J. W. Bovee presented two uteri with appendages; one removed per vaginam, the other by abdominal section.

WORK OF THE INSANE ASYLUM FOR THE MONTH OF DECEMBER.—Dr. W. W. Godding, Superintendent of the Government Hospital for the Insane, has submitted to the Commissioners the report of his office covering the month of December. During that period there were twenty-three patients admitted for treatment, of whom fourteen were white and nine colored. Of the whites nine were men and five females, with six colored men and three colored females. Fourteen patients were reported as discharged or died during the month. Four white males and two females were discharged, and two colored males. Three white males died during the period and one white female, while for the colored people one death in either sex is reported.

HEALTH OF THE DISTRICT.—The report of the Health Officer for the week ended December 29 is as follows: Number of deaths (still-births not included): White, 63; colored, 55; total, 118. Death rate per 1,000 per annum: White, 16.33; colored, 30.10; total, 20.80. Death rate per 1,000 per annum for corresponding week last year, 21.70. Still-births: White, 3; colored, 2; total, 5.

The following is the report for the week ending January 5: Number of deaths (still-births not included): White, 65; colored, 50; total, 115. Death rate per 1,000 per annum: white, 11.40; colored, 27.36; total, 22.25. Death rate per 1,000 per annum for corresponding week last year: White, 7; colored, 12; total, 19.

FIRE IN THE FREEDMAN'S HOSPITAL.—A fire occurred in this hospital on New Year's day which caused considerable alarm, but little damage. Origin, defective flue. Protection from such occurrences has already been requested by the new surgeon in charge, Dr. D. H. Williams, late of Chicago, who has asked for fire plugs, fire escapes and brick buildings to take the place of the frame ones now in use. Dr. Williams is making this hospital a model institution.

EXAMINATION OF POTOMAC ICE BY THE ARMY MEDICAL MUSEUM.—The cutting of ice in the Eastern Branch, at the end of South Capitol Street, was the subject of a number of complaints recently received at the Health Office. Inasmuch as this is the place whence all the dead animals are shipped to Mann's desiccating establishment, Dr. Woodward determined to have a thorough investigation made of the quality of the ice. Accordingly, he sent a sample to the Army Medical Museum to have a bacteriologic test made. The report to Dr. Woodward from the Medical Museum is given below:

Dear Sir:—I beg to inform you that the specimen of ice forwarded by you on the 3d inst. has been subjected to a bacteriologic examination with the result that with five plates made, each with one cubic centimeter of water, only a few colonies of the bacillus convolutus, a common water organism, were found.

I may state that this specimen, to my surprise, contains fewer colonies of bacteria than any of the other specimens of ice so far examined by us in the laboratory.

WALTER REED,
Major and Surgeon, U. S. A.

THE PROVIDENCE HOSPITAL.—The annual report of this excellent institution shows the large amount of good work done during the past year. During the year just passed a number of improvements have been made in the Hospital, thus keeping it thoroughly abreast with the best hospitals in the country. We desire to note, in particular, the introduction of steel ceilings in the wards, corridors and private rooms, by which the same are rendered more cleanly and at-

tractive, while at the same time, they are a great improvement from a sanitary point of view. The hospital has been newly painted throughout, and numerous improvements in the plumbing and ventilation have been made, all of the most modern pattern. During the past year the course of instruction for the sisters and nurses which was outlined at the last annual meeting has been put into practical operation.

CHILDREN'S HOSPITAL.—A supply of antitoxin has just been received from Berlin by the Children's Hospital, to be used in cases of diphtheria at the hospital. The annual charity ball for the benefit of the hospital has been arranged for and will soon take place.

CENTRAL DISPENSARY AND EMERGENCY HOSPITAL.—The directors are seriously considering the enlargement of the building to meet the increased demands of patients. This hospital is the center of clinical teaching in the District.

SIBLEY MEMORIAL HOSPITAL.—The admirably located and splendidly equipped Sibley Memorial Hospital, founded by Wm. J. Sibley, corner of North Capitol and Pierce Streets, will be formally opened for patients about February 1. Consulting physicians recently chosen are Drs. W. W. Johnston, J. Ford Thompson, Z. T. Sowers, S. S. Adams; medical staff, Drs. H. B. Deal, D. Olin Leech, Frank Leech, G. C. Ober, D. B. Street, J. L. Suddarth, J. T. Winter, W. C. Woodward; surgical staff, Drs. E. A. Ballach, H. H. Barker, C. W. Brown, I. S. Stone, J. Van Rensselaer, J. R. Wellington; ophthalmologist, Dr. C. R. Dufour. The deaconesses, who will also act as nurses, will receive a course of lectures on nursing, to be given by different members of the staff, the details of which are to be arranged by a committee consisting of Drs. Brown, Adams and Street.

ABOLISH THE DRINKING CUPS.—Dr. Charles H. Stowell has written a long communication to the Washington *Post*, urging the abolition of the common drinking cup so universal in the public schools. He shows the great possibility of spread, by its use, of contagious and other diseases. He suggests that each pupil carry its own drinking cup.

OPPOSITION TO MEDICAL PRACTICE LAWS.—The Eclectic Medical Society of the District of Columbia, which received a charter two years ago from Congress, held a meeting on the 10th inst. and denounced formally the proposed medical laws for the District, on the ground that all further legislation on this subject is unnecessary.

SMALLPOX IN THE DISTRICT.—There is a very persistent tendency to the spread of smallpox in the city. While no very large number of cases have so far made their appearance, every little while, despite the strenuous efforts of the Health Department, a new case is discovered and in many instances the cause of contagion is not discoverable. At present every section of the city has its case.

THE NEW MEDICAL BILL FOR THE DISTRICT.—The Commissioners gave a hearing on the 11th inst. to a number of medical men representing the Medical Society of the District and the Homeopathic Society, on the various bills now pending before Congress to regulate the practice of medicine. The Commissioners have taken the whole matter under consideration and a report on the subject may be expected very soon. It will pass to the Congressional Committee for final action. Little hope of a law exists, so long as those interested do not agree among themselves and present a plan or bill satisfactory to two or possibly the three schools now existing in the District. The general impression in Congress is that some law is necessary, but the Committee has no time to listen, during a short and busy session, to the wrangles and irreconcilable propositions from the different medical organizations.

A WASHINGTON DOCTOR IN JAPAN.—Dr. L. M. Taylor, of Washington, D. C., is in Yokohama, and writing, says among other things: "The general impression here, among intelligent foreigners, is that the Japanese will, before the spring, bring the war to a termination, resulting in their keeping Port Arthur and some additional strategetic points captured, China to pay Japan's expenses incurred during the war."

THE COST OF MAKING ANTITOXIN IN THE DISTRICT.—Health Officer Woodward appeared before the Commissioners on the 10th inst., and submitted the following estimate for the suppression of contagious diseases: For the production of antitoxin for the treatment of diphtheria—twelve horses at $40 each, $480; maintenance of twelve horses at $10 per month, $1,200; bacteriologist, $1,800; materials and apparatus, $320; total, $3,800.

VACCINATION IN THE POLICE DEPARTMENT.—Maj. W. G. Moore, Chief of the Police Department, has taken action in the smallpox matter by issuing the following order:

"Each and every member of this department will report at his station house on such days and between such hours as may be designated by the surgeons of the District, who will determine whether or not vaccination is necessary in each individual case. Each surgeon will furnish these headquarters with a list of those vaccinated, those not needing vaccination, and any who may refuse the operation, and in due time will report the result to the Major and Superintendent."

NATIONAL DAIRY UNION.—The second annual convention of the National Dairy Union is in session here. Among other objects of the Association, they have the establishment of a Dairy Division in the Department of Agriculture.

THE PUBLIC SERVICES.

Army Changes. Official list of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from Jan. 5, 1895, to Jan. 11, 1895.

Capt. WILLIAM C. SHANNON, Asst. Surgeon U. S. A., is granted leave of absence for three months, on surgeon's certificate of disability.

First Lieut. HENRY C. FISHER, Asst. Surgeon, is granted leave of absence for one month.

First Lieut. CHARLES LYNCH, Asst. Surgeon, leave of absence granted is extended one month.

First Lieut. GEORGE D. DE SHON, Asst. Surgeon, will proceed from Ft. Logan, Col., to Ft. Douglas, Utah, and report for temporary duty.

Capt. REUBEN L. ROBERTSON, Asst. Surgeon, leave of absence granted for seven days is extended twenty-one days.

Capt. ADRIAN S. POLHEMUS, Asst. Surgeon, is granted ordinary leave of absence for one month and fourteen days, in addition to the extension of leave of absence granted him on surgeon's certificate of disability.

Navy Changes. Changes in the Medical Corps of the U. S. Navy for the week ending Jan. 12, 1895.

Asst. Surgeon AMMEN FARENHOLT, detached from the U. S. R. S. "Vermont," and to Naval Hospital, Norfolk, Va.

Asst Surgeon C. P. KINDLEBERGER, detached from Naval Laboratory and Department of Instruction, and to the U. S. R. S. "Vermont."

Medical Inspector GEORGE H. COOKE, in addition to present duties, will attend officers on duty at League Island Navy Yard but residing outside of the Yard.

LETTERS RECEIVED.

Anderson, Winslow, San Francisco, Cal.; Ayer, S. P., Kewanee, Ill.
Antikamnia Chemical Co., St. Louis, Mo.
Birney, E., Greene, Iowa; Bates, X. T., Poughkeepsie, N. Y.; Brownne, J. S. Newton, York, N. Y.; Brown, Warren, San Francisco, Cal.; Bagwell, J. F., Diehlstadt, Mo.; Bridges, Norman, Los Angeles, Cal.; Blair, J. M., Houston, Texas; Barnsdale, Robt., Plover, Ill.
Central News Co., Napervville, Ill.; Central Col. of Physicians and Surgeons, Indianapolis, Ind.; Columbia Chemical Co., Washington, D. C.; Coley, Wm. B., New York, N. Y.; Clousen, J., Omaha, Neb.
Davis, Geo. S., Detroit, Mich.; Doliber, Goodale & Co., Boston, Mass.; Drew, C., Jacksonville, Fla.
Elliott, A. R., Chicago, Ill.; Edwards, S., Oakfield, Wis.; Elliott, W. S. Woodford, Tenn.; Ewing, W. Brown, Wernersville P. O., Pa.
Fowler, Nath'l C., Jr., Yonkers-on-Hudson, N. Y.; Flaherty, James, Prattsburg, N. Y.; Frazee, Geo. E., Ann Arbor, Mich.
Gross, M. S. E., Chicago, Ill.; Grady, Richard, Baltimore, Md.; Gerhard, Wm. P., New York, N. Y.
Hamilton, E. E., Wichita, Kansas; Harrison, W. G., Talledego, Ala.; Hummel, A. L., (2) Philadelphia, Pa.; Hurd, A. W., Buffalo, N. Y.; Howle W. P., Oran, Mo.; Hyman & Schambs, Cleveland, Ohio; Holland, J. W. Philadelphia, Pa.
Judkins, E. H., Portland, Me.; Jenkins, W. R., New York, N. Y.
Keener, W. T. Co., Chicago, Ill.; Kenyon News & Subscription Co., Chicago, Ill.; Kerr, W. S. Mansfield, Ohio.
Longmans, Green & Co., (2) New York, N. Y.; Lippincott, J. B. Co., Philadelphia, Pa.; Lord & Thomas, Chicago, Ill.
Marchand, Chas., (2) New York, N. Y.; Med. Dept. Mutual Life Insurance Co., New York, N. Y.; McKeown, W. W., Youngstown, Ohio; Means, W. J., Columbus, Ohio; Moore, W. E., Derby, Iowa; MacGowan & Cooke, Chattanooga, Tenn.
Pierson, Allen, Spencer, Ind.; Parke, Davis & Co., Detroit, Mich.
Raeder, J. W., Wilkes Barre, Pa.; Rational Chemical Co., St. Louis, Mo.; Rees, A. M., Charleston, S. C.
Stewart, F. E., Detroit, Mich.; Smith, C. W., Horner, W. Va.; Sinnett, J. H. M., Smithville, W. Va.; Schieffelin, W. H. & Co., New York, N. Y.; Southworth, Chas. T., Monroe, Mich.
Van Hook, R. C., Lebanon, Tenn.
Wright, J. P., St. Louis, Mo.; Woltishek, F. J., Cedar Rapids, Iowa; Ward, V. J., Miller, Ga.; Washburn, A. A., (2) Clinton, Md.; Woodbridge, J. E., Youngstown, Ohio; Westerman, B. & Co., New York, N. Y.; Whufield, A. J., San Luis Potosi, Mexico.